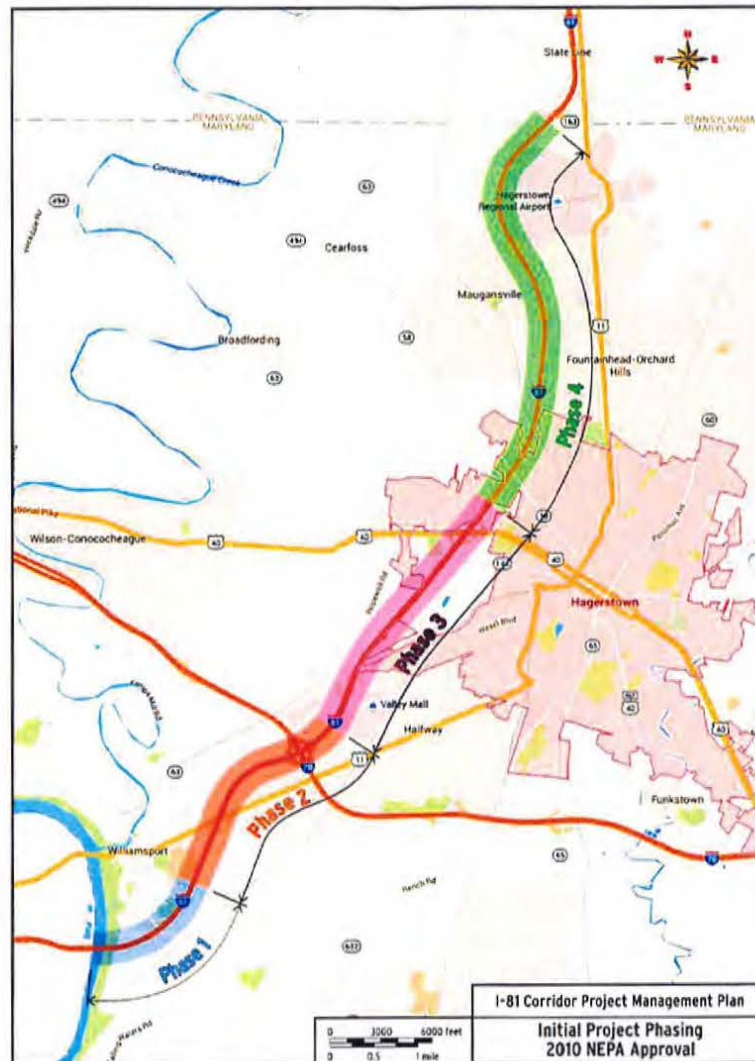


# I-81 Improvement Project

From the West Virginia State Line to the Pennsylvania State Line

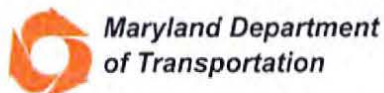
Washington County, MD

## Project Management Plan



Submitted: June 6, 2016

Submitted by: Maryland State Highway Administration





U.S. Department  
of Transportation  
**Federal Highway  
Administration**

**Maryland Division**

July 19, 2016

10 South Howard Street, Suite 2450  
Baltimore, MD 21201  
(410) 962-4440  
(410) 962-4054  
<http://www.fhwa.dot.gov/mddiv/>

In Reply Refer To:  
HDA-MD

Mr. Gregory C. Johnson, P.E.  
State Highway Administrator  
Maryland Department of Transportation's  
State Highway Administration  
707 North Calvert Street  
Baltimore, MD 21202

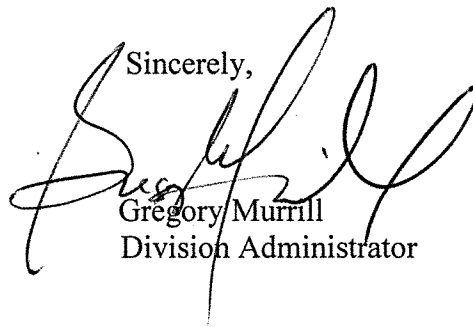
Dear Mr. Johnson:

FHWA has reviewed the Project Management Plan (PMP) for the I-81 Improvement Project submitted on June 6, 2016. All comments on the previous drafts have been addressed to our satisfaction. We are of the opinion that the plan submitted by MDOT/SHA complies with the requirements contained in FHWA's PMP Guidance dated January 2009 and therefore we are approving your request.

The I-81 Improvement Project PMP is a living document and we recommend that MDOT/SHA update the PMP as necessary to generate the most effectively managed project meeting all the project goals and objectives. We would like to acknowledge your staff's efforts and cooperation in finalizing the PMP.

Should you have any questions, please contact Daniel Suarez at 410-779-7159 or [daniel.suarez@dot.gov](mailto:daniel.suarez@dot.gov).

Sincerely,



Gregory Murrill  
Division Administrator

cc:

Barry Kiedrowski – MDOT/SHA

Puskar Kar – MDOT/SHA

Guy Talerico – MDOT/SHA

MARYLAND STATE HIGHWAY  
ADMINISTRATION

I-81 IMPROVEMENT PROJECT

PROJECT  
MANAGEMENT PLAN  
LETTER OF  
ENDORSEMENT

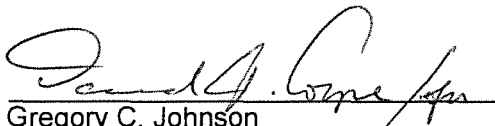
The Maryland State Highway Administration, along with the Federal Highway Administration, have developed a Project Management Plan for the I-81 Improvement Project.

The Project Management Plan has been developed to follow the guidelines set forth by 23 USC Section 106(h).

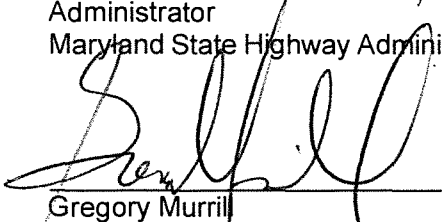
This document provides a summary description of the organization, management systems, and processes that will guide the full range of activities required to complete the I-81 Improvement Project.

This Project Management Plan is a living document and will be continuously reviewed, revised, and updated as the project proceeds in order to generate the most effectively managed project meeting all the project goals and objectives.

The undersigned for the Maryland State Highway Administration and the Federal Highway Administration fully endorse this Project Management Plan and are committed to achieving the goals and objectives as set forth herein.

  
\_\_\_\_\_  
Gregory C. Johnson  
Administrator  
Maryland State Highway Administration

6/30/16  
Date

  
\_\_\_\_\_  
Gregory Murrill  
Division Administrator  
Federal Highway Administration

7/5/16  
Date



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## 1.0 PROJECT DESCRIPTION AND SCOPE OF WORK

### PROJECT DESCRIPTION

The I-81 Improvement Project extends from the West Virginia state line to the Pennsylvania state line through Washington County, Maryland. The purpose of this project is to improve safety and traffic operations along I-81. To achieve this purpose, I-81 will be widened to six lanes on the inside (towards the median). The outside lanes will include a two-lane C-D road with an additional auxiliary lane extending from the I-70 interchange through the Halfway Boulevard interchange for both north and southbound structures. This project will require the widening of the northbound and southbound spans of Bridge No. 21078, which carries I-81 over the Potomac River. Improvements to ten interchanges within the project will also be made:

- Exit 1: I-81 @ MD 68
- Exit 2: I-81 @ US 11
- Exit 4: I-81 @ I-70
- Exit 5: I-81 @ Halfway Boulevard
- Exit 6: I-81 @ US 40
- Exit 7: I-81 @ MD 58
- Exit 9: I-81 @ Maugan Avenue
- Exit 10: I-81 @ Showalter Road
- Exit 1 (PA): I-81 @ PA 163

### DETAILED SCOPE OF WORK

I-81 will be widened to six twelve-foot wide lanes on the inside (towards the median). The outside lanes will include a C-D road consisting of two twelve-foot wide lanes with an additional twelve-foot wide auxiliary lane extending from the I-70 interchange through the Halfway Boulevard interchange for both north and southbound structures. This will require the widening of the northbound and southbound spans of Bridge No. 21078, which carries I-81 over the Potomac River. A typical cross section is provided below.

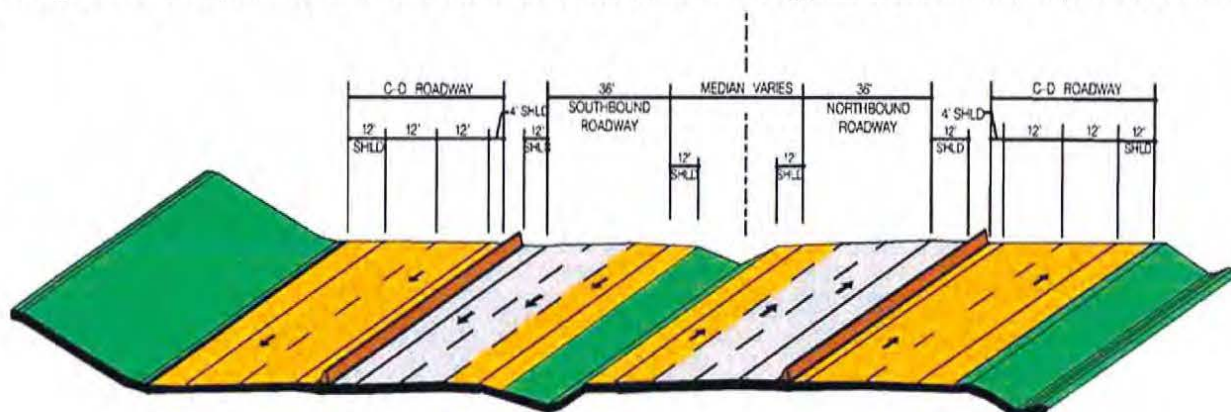


Figure 1: Typical Section - Inside Widening with C-D Roads



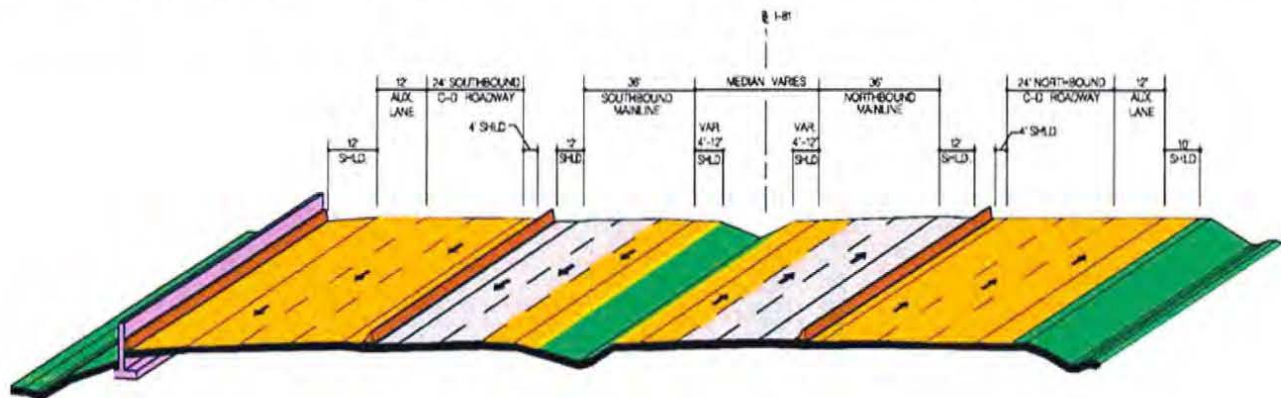
The improvements at the interchanges proposed with the Maryland State Highway Administration (MDSHA) Selected Alternate include the following:

**Exit 1: MD 68/MD 63** – Traffic volumes are relatively low at this interchange, and only five crashes occurred over a 5-year period from 1998-2002. Only one ramp (MD 68/63 to southbound I-81) has an unacceptable 2025 LOS in the PM peak hour, due to an insufficient acceleration lane. The acceleration lane from Conococheague Street (MD 68) to southbound I-81 will be extended from the existing length of 500 feet to 1,230 feet. This will improve the 2025 LOS in the PM peak hour from “D” to “C”.

**Exit 2: US 11** – Traffic volumes are relatively low at this interchange, except for the ramp from southbound I-81 to US 11. Only three crashes occurred during the 1998-2002 study period. The two southbound ramps will operate at a LOS "D" in 2025 due to high traffic volumes and/or insufficient acceleration/deceleration lanes. All of the existing acceleration/deceleration lanes will be extended to at least 1,200 feet, except for the deceleration lane provided for traffic traveling from northbound I-81 to US 11.

**Exit 4: I-70** – This interchange will be completely reconstructed due to the existing poor geometry and lack of acceleration/deceleration lanes on both I-81 and I-70. In the 5-year period from 1998-2002, 67 crashes occurred at this interchange. Due to the proximity of the Halfway Boulevard interchange, an auxiliary lane will be provided to connect the I-70 westbound off-ramp to the Halfway Boulevard eastbound off-ramp. This will provide increased distance for vehicles to weave and improve the LOS and operations through this area.

The C-D road will run from the I-70 interchange (Exit 3) through the current Halfway Boulevard interchange (Exit 4) as follows. A typical section of this portion of the roadway is provided as Figure 2.



**Figure 2: I-81 at the I-70 interchange**

**Northbound I-81** – The two-lane northbound C-D road will begin approximately 2,300 feet north of US 11 as a two-lane exit ramp. The outside lane will provide drivers with two options: connect with the I-70 eastbound ramp or continue through the interchange. The inside lane will continue through the interchange. An auxiliary lane will join the two-lane C-D road at the I-70 on-ramp and continue north to the Halfway Boulevard interchange, ending at the off-ramp to Halfway Boulevard eastbound. The two-lane C-D road will then merge back to I-81 approximately 3,000 feet north of Halfway Boulevard. All movements to and from I-70 and Halfway Boulevard will be made from this C-D road.



**Southbound I-81** – The two-lane southbound C-D road will begin approximately 3,300 feet north of Halfway Boulevard and continue through the Halfway Boulevard interchange with a third auxiliary lane connecting the on-ramp from Halfway Boulevard to the I-70 westbound off-ramp. The C-D road will then merge back with the mainline approximately 2,500 feet north of the US 11 exit ramp gore.

The construction of the C-D road will move the merge and diverge movements off the mainline onto the C-D road where the lower speeds and volumes will allow these movements to be safer. This will significantly improve the operations and safety along the mainline. The existing Halfway Boulevard structure was designed to allow for the inside widening of I-81. However, in order to provide the C-D road, it will be necessary to construct a retaining wall along Halfway Boulevard.

**Exit 6: US 40** – Weaving issues exist due to the cloverleaf structure of the interchange. Most of the ramps will operate at a LOS "D" for the year 2025 under the existing conditions. For a 5-year period from 1998-2002, there were 16 crashes. The interchange will be converted from a full cloverleaf to a diamond or half-cloverleaf design. The ramps in the northwest (US 40 west to I-81 south) and southeast (US 40 east to I-81 north) quadrants will be removed and replaced with slip ramps. This will eliminate the weave that currently exists at this interchange and reduce the number of crashes. Left turn lanes will be constructed for US 40 eastbound to I-81 northbound and for US 40 westbound to I-81 southbound. Due to the distance between this interchange and Exit 6, an auxiliary lane will be provided for the northbound and southbound directions connecting the two interchanges. This will allow a weave movement rather than the merge and diverge in the short distance in addition to providing longer lengths for vehicles to accelerate and decelerate. With these improvements, all movements are projected to operate at a LOS "C" or better in 2025.

**Exit 7: MD 58** – Under existing conditions, every ramp at this interchange will function at a LOS "D" or worse in either the AM or PM peak hour in 2025. In addition, 13 crashes occurred at this interchange in a 5-year period from 1998-2002. The acceleration lanes provided for traffic coming from MD 58 to I-81 in either direction are severely inadequate. The acceleration/deceleration lanes on the ramps to I-81 northbound and southbound will be extended from 450 feet to 1,230 feet in order to accommodate growing traffic volumes along I-81. This will improve the merge LOS from "E" to "D" on the northbound ramp and from "D" to "C" on the southbound ramp. Due to the distance between this interchange and Exit 7, an auxiliary lane will be constructed in both directions along I-81 between MD 58 (Cearfoss Pike) and the US 40 interchanges. This will allow a weave movement rather than the merge and diverge in the short distance in addition to providing longer lengths for vehicles to accelerate and decelerate.

**Exit 9: Maugans Avenue** – The existing ramp to southbound I-81 will be widened to two lanes. A double left-turn lane will be constructed on westbound Maugans Avenue to I-81 southbound. The intersection of Maugans Avenue and the I-81 southbound ramp will operate at LOS "C" in the AM peak hour and "D" in the PM peak hour. The merge onto I-81 will operate at LOS "D" and "C" in the AM and PM peak hours, respectively.

**Exit 10: Showalter Road** – The majority of the ramps have an acceptable LOS, and six crashes occurred from 1998-2002. Weaving issues exist due to the cloverleaf structure of the interchange. The existing interchange will be modified to a half cloverleaf in order to eliminate the weave movement on I-81. Eliminating the loop ramps in the northwest and southwest quadrants and providing left turn lanes on Showalter Road will eliminate the weave between the loop ramps.

**Exit 1 (PA): PA 163** – This interchange is half in Pennsylvania and half in Maryland. There are acceptable levels of service at all ramps and four crashes occurred in a 5-year period from 1998-2002. The existing acceleration lanes on the Maryland portion of the interchange will be extended from 1,056 feet to 1,230 feet, improving the AM LOS from "C" to "B".

### **ADDITIONAL SCOPE OF WORK**

Subsequently to the EA and FONSI, the MDSHA has identified that following additional elements that will be, or are being considered to be, part of the I-81 Improvement Project:

- MDSHA District has identified an immediate need to improve safety and mobility along I-81 Southbound between MD 58 (Salem Ave.) and US 40 (National Pike). This will be addressed by providing a continuous auxiliary lane one southbound lane I-81 between the two interchanges.
- As part of normal maintenance, the entire I-81 corridor in MD will be resurfaced.

In addition, in accordance with the memorandum between the MDSHA and West Virginia Department of Highway (WVDOH) (included in the Appendix), the MDSHA will be including design and construction of I-81 from US 11 in West Virginia to the MD State Line for WVDOH. The WVDOH elements will be administered as part of the I-81 Improvements Project subject to this PMP as specifically noted for WVDOH elements.



## 2.0 GOALS AND OBJECTIVES

### SUMMARY

The purpose of this project is to improve traffic operations and safety along the I-81 corridor from the West Virginia state line to the Pennsylvania state line, a distance of approximately 12 miles. The I-81 corridor is an important north-south facility in western Maryland. Recent and planned economic development activities along the corridor have caused I-81 to experience increasing operational problems

### IMPROVE TRAFFIC OPERATIONS

A Level of Service (LOS) analysis for 2000 and 2025 was performed for all I-81 mainline sections and interchange ramps. Level of Service is a measure of the congestion experienced by drivers, and ranges from "A" (free flow with little or no congestion) to "F" (failure with stop-and-go conditions). In 2000, I-81 was operating at levels of service ranging from "A" to "C." By 2025, with the increase in traffic volumes, the LOS along parts of the mainline will deteriorate to LOS "E."

### SAFETY

Safety is currently reduced due to a high percentage (34 percent Average Daily Traffic) of truck traffic combined with substandard interchange design and poor spacing between interchanges. From January 1999 to June 2004, there were 452 reported crashes along the I-81 mainline. The average crash rate was 35.3 crashes for every 100 million vehicle miles of travel (acc/100 mvm). While this crash rate is lower than the statewide average crash rate of 54 acc/100 mvm for similar highways now under state maintenance, the rates for fatal crashes (1.0 acc/100 mvm) and truck related crashes (12.0 acc/100 mvm) are significantly higher than the statewide average of 0.4 acc/100 mvm and 9.0 acc/100 mvm, respectively.

Between January 1998 and December 2002, there were 131 crashes on the interchange ramps along I-81 between the West Virginia and Pennsylvania state lines. Roughly 51 percent (67 of 131) of those crashes occurred on the I-70 interchange ramps. Approximately 40 percent of the I-70 crashes (27 of 67) involved heavy trucks. Ten of those 27 truck crashes occurred at the loop ramp in the south quadrant of the interchange, eastbound I-70 to northbound I-81, where truck drivers were exceeding the speed limit and overturned their vehicles.

### BUDGET

MDSHA is committed to delivering a quality project within the budget established for the project. More information on the Project Budget is included in Section 6.

### SCHEDULE

MDSHA intends to deliver the project as outlined in Section 6, subject to the availability of funding. Once project phases are funded, MDSHA will establish design and construction schedules for those phases, and each phase will be subject to schedule goals and objectives.



**QUALITY**

Design and Construction quality are important goals for the I-81 Improvements Project. Quality measurements will include, but not be limited to, schedule, budget, design quality, construction quality, safety, scope control, and public trust and confidence.

## 3.0 PROJECT ORGANIZATION CHART, ROLES, AND RESPONSIBILITIES

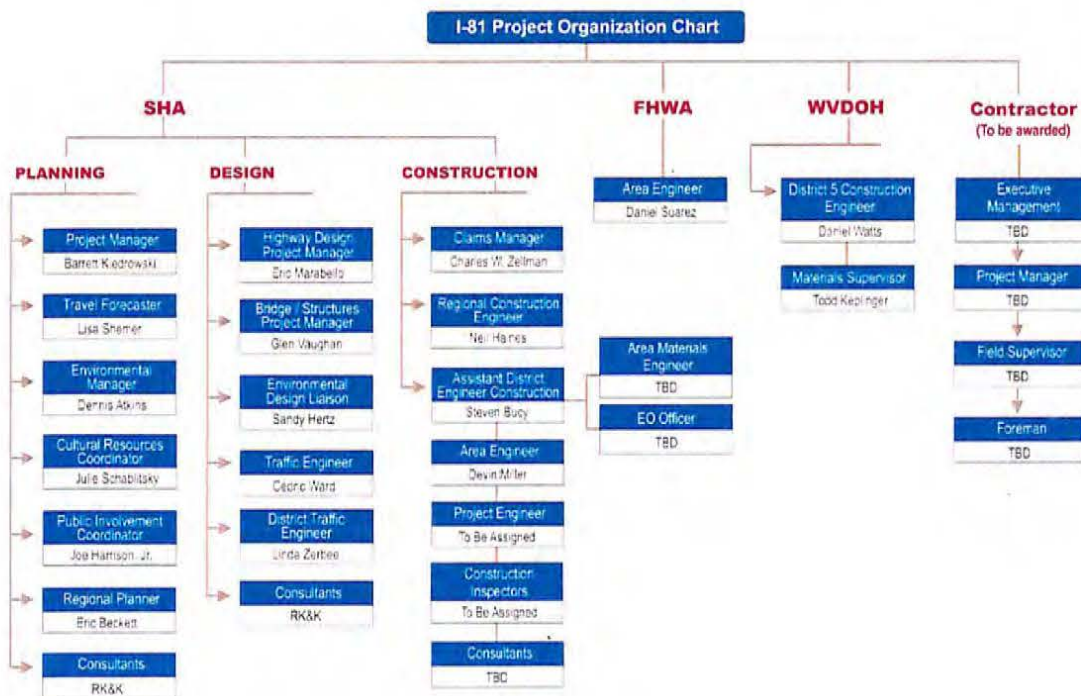
### SUMMARY

As a modal administration underneath MDOT, the MDSHA will administer the I-81 Improvements Projects. This project will be administered using the typical organization, policies and procedures in place for all MDSHA projects. It is not anticipated that a project specific office or division will be established for this project.

### ORGANIZATION CHARTS

The following organization chart is included to demonstrate the chain of communication and responsibilities between MDOT and MDSHA.

The following organizational chart further describes the organization and roles within the MDSHA.





## **ROLES AND RESPONSIBILITIES**

### **Program Management**

The MDSHA Administrator will provide overall direction to all MDSHA offices for the I-81 Improvements Project. The MDSHA Administrator will also be responsible for coordination with MDOT.

### **Planning**

The Project Manager will be responsible for overall management and direction of the Project during the planning for the project and for planning of individual phases on the project. The Project Manager is also responsible for overall project tracking, reporting, Financial Plan and updates, and Project Management Plan development and updates. Finally, the Project Manager remains responsible for ensuring that design and construction work completed on the individual phases of the Project are in accordance with the NEPA documents and other Project commitments. The Project Manager is supported by the following staff:

- Travel Forecaster – provides and updates travel forecasts and traffic information for use by the project team in final design, maintenance of traffic, etc.
- Environmental Manager – ensures that relevant environmental commitments, permits, and regulations are obtained and obligations met during all phases of the project.
- Cultural Resources Coordinator – Working with the environmental manager, the cultural resources coordinator helps to ensure that cultural resources are properly considered.
- Public Involvement Coordination – Develops and coordinates the public outreach and information program during the planning, design and construction phase of the project.
- Regional Planner – Ensures that the Project and it's phases are in conformance with regional and master plans.
- Consultants – At the discretion of the Project Manager, consultants will be used to perform necessary activities in support of the project and the obligations/duties listed above.

### **Design**

The Highway Design Project Manager will be responsible for the development of final design documents and procurement packages for each of the Project Phases. The Highway Design Project Manager will coordinate with the planning staff to ensure that the final design is in conformance with the planning requirements and commitments. During Construction, the Highway Design Project Manager will provide information, updates and revisions as necessary to support administration of the construction contracts. The Highway Design Project Manager is supported by the following staff:

- Bridge/Structures Project Manager – provides all necessary structural and bridge designs.
- Environmental Design Liaison – leads coordination with the planning Environmental Manager and Cultural Resources Coordinator to ensure that all environmental requirements are properly integrated into the final design and procurement packages.
- Traffic Engineer – Develops and coordinates all traffic elements of the final design.
- District Traffic Engineer – Coordinates with the Design Project Manager and others performing design to ensure that the specific needs of the district are considered during design, including maintenance of traffic requirements.
- Consultants – At the discretion of the Highway Design Project Manager, consultants will be used to perform necessary activities in support of the project and the obligations/duties listed above.



### **Construction**

The Claims Manager is responsible for reviewing and analyzing all construction contract claims to determine if the contractor is entitled to additional money and/or time. This includes gathering the appropriate documents; interviewing personnel; visiting the site; taking photographs; researching specifications, laws, and codes; preparing reports and letters; supervising statewide claims consultants; setting up and attending meetings with the appropriate parties.

The Regional Construction Engineer will monitor each construction contract from the design phase throughout the construction phase to assure quality and uniform construction techniques through the use of Quality Assurance/Quality Control practices. Responsibilities include serving as liaison between OOC management, District Offices and Field Offices, establishing Contract Requirements, Construction Inspection Reports, overseeing Sediment and Erosion Control Compliance, approval of pile hammer and driving criteria, ensuring FHWA Certification Acceptance (CA) requirements are adhered to on state and local government construction projects and compliance with Standards and Specifications for Construction. The Regional Construction Engineer is supported by the following staff:

- Assistant District Engineer for Construction – Oversees numerous construction contracts within the District, supporting each contract in administration, change orders, claims, issue resolution, contract payments, etc.
- Area Engineer – Provides support for the Assistant District Engineer for specific projects within the District and is the first resource for issue escalations.
- Area Materials Engineer – Supports the Area Engineer by tracking and provides materials approvals for the construction contracts.
- EO Office – Supports the Area Engineer by administering all civil rights aspects of the construction contracts and facilitating related audits.
- Project Engineer – The Project Engineer has day to day administration responsibilities for a single construction contract, and is the primary point of contact for the contractor.
- Construction Inspectors – The construction inspectors are responsible for protecting the MDSHA against defects and deficiencies in the constructed work. Reporting from the construction inspectors is also used to support contract administration.
- Consultants – At the discretion of the Assistant District Engineer for Construction, consultants will be used to perform necessary activities in support of the project and the obligations/duties listed above.

### **FHWA**

The FHWA Area Engineer will be the primary contact for MDSHA to ensure compliance with all FHWA requirements during planning, design, procurement and construction.

### **WVDOH**

The WVDOH District 5 Construction Engineer will coordinate with MDSHA's Assistance District Engineer for Construction to ensure that all WVDOH requirements are met with respect to work that MDSHA is constructing for WVDOH. Construction inspection, materials approvals, claims review, change order reviews, payment, and other contractual matters regarding the WVDOH will be administered by the WVDOH District 5 Construction Engineer.

The WVDOT Materials supervisor will assist the WVDOT District 5 Construction Engineer with respect to materials source, supply, approvals, certifications and payment release.

**Contractor**

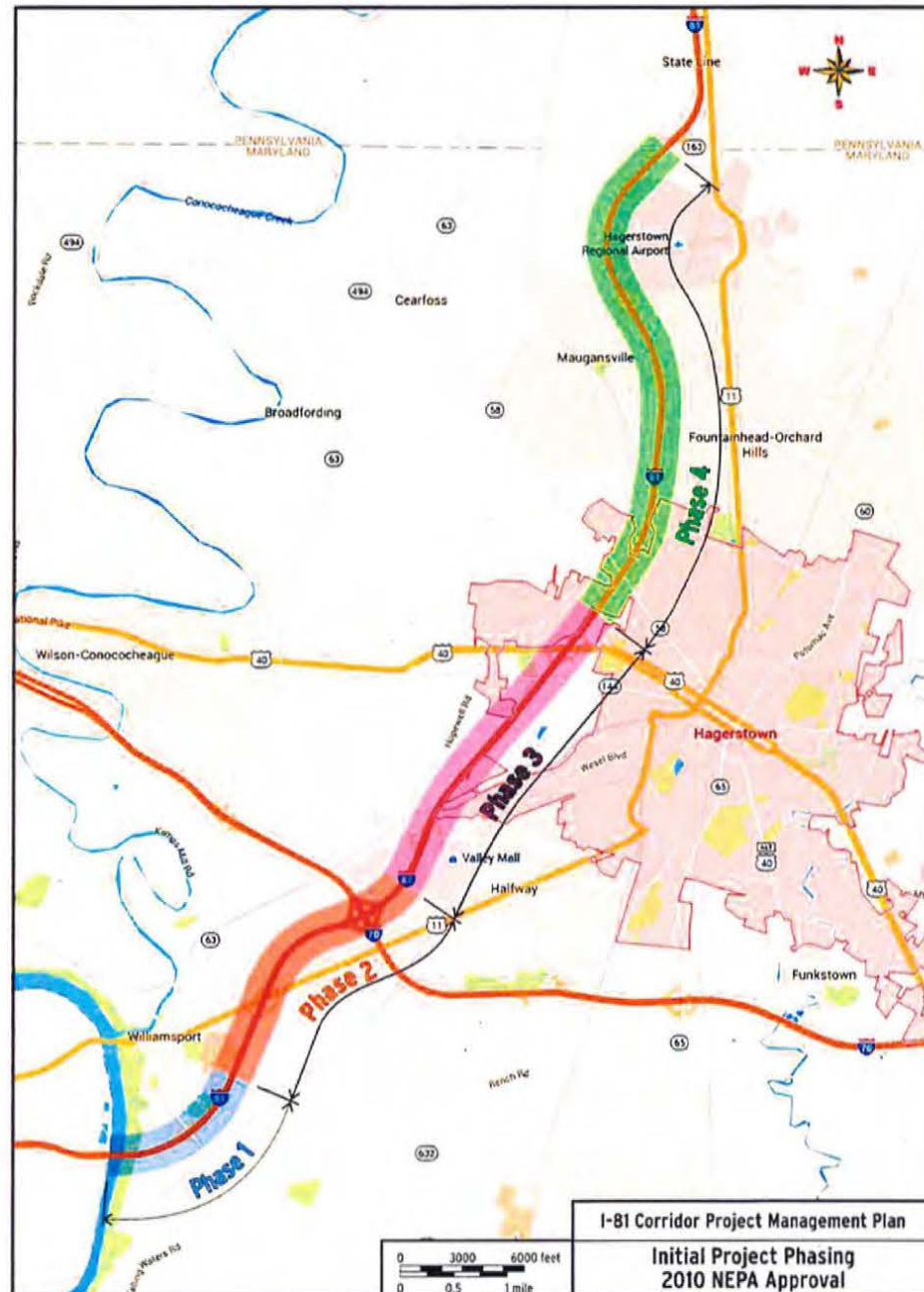
The organization chart, as well as the roles and responsibilities, for the contractor will be determined by the selected contractor for each construction contract, subject to the minimum requirements established by the construction contract. Typical positions include Executive Management, Project Manager, Field Supervisors, and Foreman.



## 4.0 PROJECT PHASES

### SUMMARY

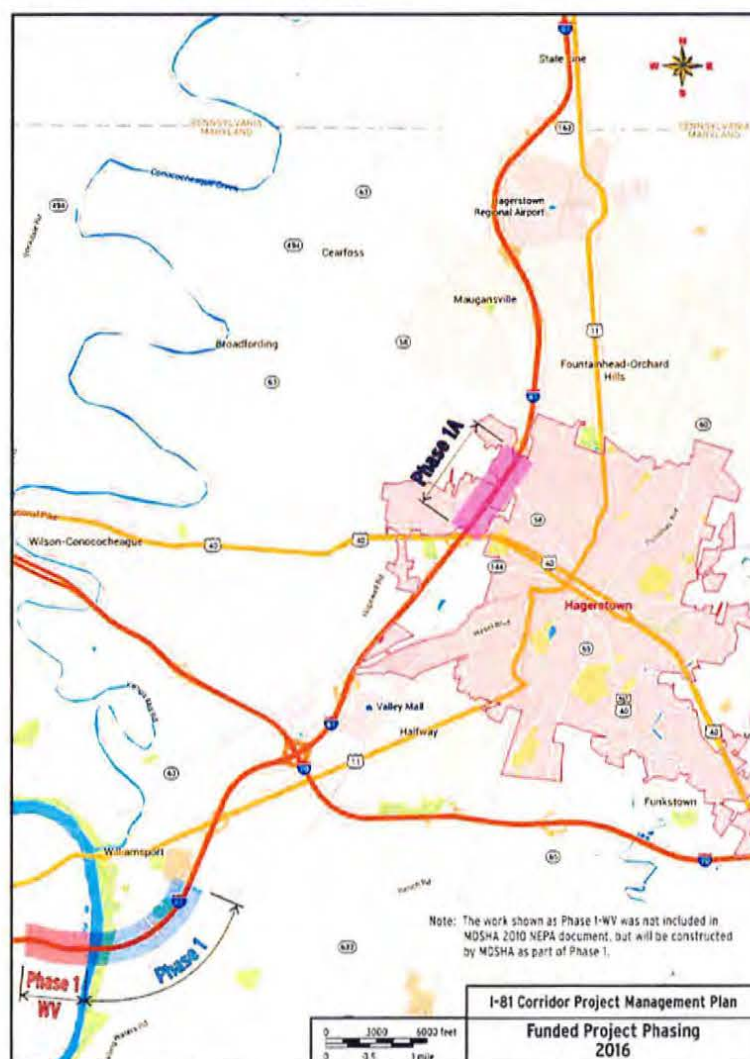
During the planning study, the I-81 Improvements Project was split into 4 phases based geographic location, funding availability, and need (see figure below).



While general phases established during project planning are indicated above, their priority and/or content may be adjusted based on a number of factors, including:

- Changing traffic and/or safety conditions;
- Funding availability;
- County Priority;
- Coordination with routine maintenance such as resurfacing; and
- Logical segmentation based on selected procurement method.

For example, since the phases were established during project planning, a Phase 1A has been added to address immediate needs including a maintenance resurfacing project. In addition, at the request of WVDOH, work within West Virginia that was not included in MDSHA's NEPA document has been added to Phase 1. The currently funded work is shown below:





All phases, both funded and unfunded, are described below.

### PHASE 1 (INCLUDING WEST VIRGINIA WORK)

Phase 1 includes improvements along I-81 from South of US Rte. 11 in West Virginia to North of Maryland Rte. 63/68 in Maryland including widening and superstructure replacement for dual bridges No. 21078 on I-81 over the Potomac River and dual bridges No. 21077 on I-81 over Maryland Rte. 63/68. The work will include the following:

- Widening, paving, and resurfacing on the approach roadways along I-81.
- Permanent widening of the existing dual bridges in the median area of I-81 at the crossing of the Potomac River and MD Rte. 63/68.
- Removal and replacement of the bridge deck and structural steel for the existing portions of each bridge.
- Replacement and widening of the existing abutments, and widening of the bridge piers at the dual bridges on I-81 over the Potomac River.
- Widening and rehabilitation of the existing abutments and bridge piers at the dual bridges on I-81 over MD 63/68.
- Construction of drainage and storm water management measures throughout the limits of the project.
- Placement of w-beam traffic barriers, signing, and pavement markings.
- Landscaping along I-81.

This phase is currently funded for design and construction.

As of the date of this PMP, design is nearing completion and construction is scheduled to commence in summer of 2016.

The work within West Virginia was added to the project after completion of the I-81 FONSI and is not covered by the FONSI. The FONSI only covers the I-81 improvements planned within the state of Maryland. WVDOT is conducting a separate NEPA process to obtain necessary approvals for the West Virginia portion of the work.

### PHASE 1A

Phase 1A consists of an extending an auxiliary lane on I-81 Southbound from MD 58 to US40 (approximately 0.57 miles). This phase will also include resurfacing of I-81 from Halfway Blvd to the PA State line. Originally planned as two separate projects, these jobs were combined as funding became available and the limits of the projects overlapped.

This phase is currently funded for design and construction.

As of the date of this PMP, design is nearing completion and construction is scheduled to commence in the summer of 2016.



## PHASE 2

Phase 2 includes work on I-81 from south of US 40 to north of I-70, for a total length of 2.58 miles. This phase includes the planned interchange improvements at two interchanges - Halfway Blvd and US 40.

This phase has not been funded for design or construction.

## PHASE 3

Phase 3 includes work on I-81 from south of US 40 to north of I-70, for a total length of 3.01 miles. The planned interchange improvements at I-70 and US 11 are included.

This phase has not been funded for design or construction.

## PHASE 4

Phase 4 will complete the remaining work on the I-81 Corridor, from north of US40 to PA163, for a length of 4.87 miles long. Interchange improvements at 5 locations are included: MD58, Maugansville, Maugans Ave, Showalter Rd and PA163.

This phase has not been funded for design or construction.

## 5.0 PROCUREMENT AND CONTRACT ADMINISTRATION

### PROCUREMENT

#### Professional Services

The MDSHA may use both in-house staff and consultants for the required professional services on the I-81 Improvements Project. The MDSHA may choose to utilize existing or future "open end" task based professional services contracts or may issue a project specific professional services contract. Professional services are currently being provided using an "open end" task based contract.

All Maryland Department of Transportation (MDOT) Architectural/Engineering (A/E) projects are pursued on a competitive technical/negotiated price basis. All A/E projects in excess of \$200,000 are pursued in accordance with COMAR 21.12.02, which sets forth the regulations of the Transportation Professional Services Selection Board (TPSSB) and MDOT's A/E Internal Guidelines.

The Office of Procurement and Contract Management's (OPCM) Consultant Services Division (CSD) is responsible for the procurement of MDSHA's A/E contracts in accordance with COMAR Title 21.12.02, MDOT's A/E Internal Guidelines and Federal Laws and Regulations, and advertising all MDOT TPSSB A/E projects in excess of \$200,000 to solicit Consultant Expressions of Interest. Project advertisements are placed in The Daily Record and in eMaryland Marketplace for a minimum of 15 days per COMAR Title 21.12.02.10.10 Regulations.

#### Construction Services Procurement

At least five construction phase procurements are currently anticipated for the I-81 Improvements Project. Phase I and Phase IA are nearly 100% designed and will be procured using the design-bid-build method in accordance with COMAR Title 21 – State Procurement Regulations.

The MDSHA will review the remaining Phases of the project at the preliminary design phase to determine the most appropriate procurement method. Alternative procurements will be considered in accordance with the decision parameters and matrix contained in MDSHA's Design-Build Manual. In addition to Design-Build, the MDSHA may also consider variations on Design-Build, Construction Management at Risk (also referred to as CM/GC), Public Private Partnership (P3), or other methods as may be allowable based on State and Federal regulations.

### CONTRACT ADMINISTRATION

The contract administration approach for the I-81 Improvement Project will be the approach used for a traditional MDSHA Design-Bid-Build, following established design, contracting, award and construction processes. The major difference for the I-81 Project will be the Quality Assurance / Quality Control requirements for the portion of the Project being funded by and constructed in the State of West Virginia. MDSHA will provide Construction Management oversight for the entire Project including the work in the State of West Virginia.

Although not all of the construction will be funded with Federal Aid Funding, FHWA will be involved on federally funded project phases in an oversight role. During construction, this oversight will include change order review and approval, time extension approval, and involvement in issue resolution as



needed. The FHWA Area Engineer will be copied on pertinent correspondence, have access to all construction documents, attend progress meetings, and generally be involved throughout the entire construction duration. Additionally, the FHWA Area Engineer will review the yearly updates to the Financial Plan, and ensure Project compliance with the NEPA commitments.

### **Construction Management Guidelines**

Construction Management Procedures for the I-81 Improvement Project will be in accordance with the following:

- 2008 Standard Specifications for Construction and Materials
- Supplemental Specifications and Provisions to the July 2008 Standard Specifications for Construction and Materials Book
- Maryland State Highway *Construction Manual*
- 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control
- Book of Standards For Highway & Incidental Structures
- Maryland Manual on Uniform Traffic Control Devices - 2011 Edition
- MDSHA Office Of Construction Directives and Memos
- Material Quality Assurance Processes Manual

In addition, work performed in Phase I for WVDOH will consider the following:

- WVDOH Standard Specifications for Roads and Bridges - 2010 Edition
- 2011- 2016 Supplemental Specifications
- WVDOH 2002 Construction Manual

### **Construction Management**

The MDSHA District Office will manage all phases of construction from contract award through completion and close out. The planning and design staff will remain involved to provide support during construction including responses to questions, shop drawing review, and other technical assistance as required. Technical support and monitoring in areas including of geotechnical, traffic engineering, erosion and sediment control, and environmental compliance, materials testing and acceptance, and other specialty areas will be provided by the appropriate Divisions within MDSHA. Specific duties of the MDSHA District Office will include but will not be limited to the following:

#### **Project Administration**

- Review and process monthly progress payments submitted by field staff.
- Negotiate project change orders and unit prices for new materials, changed conditions, quantity adjustments, etc.
- Coordinate review and concurrence of monthly progress payments and change order request involving WVDOH works
- Request Project Funding for construction change orders.
- Provide project cash flow projections to MDSHA's Office of Finance, as required.
- Review contract construction schedules and time extension request as required.
- Prepare project progress and financial status reports for MDSHA's management and FHWA.
- Serve as the point of contact for any project related questions on construction issues and construction schedules.
- Monitor and coordinate activities that impact adjacent contracts
- Monitor the progress of the overall Project to ensure contract completion to meet established goals.



## Management of Project Construction

- Direct and coordinate project Quality Control inspection personnel throughout the site including the portions of the project being constructed in West Virginia.
- Coordinate Quality Assurance Inspections by MDSHA and WVDOH staff.
- Provide guidance through Technical Specialists to the construction field personnel.
- Coordinate project public involvement activities with the Office of Communications.
- Serve as the technical point of contact for all project construction related questions from the general public.
- Provide information to MDSHA's Community Relations staff for responses to public officials, and the press. Serve as the MDSHA's point of contact for these inquiries, as required.
- Participate in and make presentations at meetings as required.
- Coordinate the preparation of project progress reports required by environmental permits and FHWA.
- Coordinate with utility companies to make necessary utility adjustments during construction.
- Coordinate with OMT's Materials & Research staff for IA material testing and inspection.
- Oversee the Contractor's compliance with provisions contained in the Utility Statement, Maintenance of Traffic Plans and Requirements, and the Environmental Compliance Provisions of the Contracts
- Review and Coordinate adherence to the provisions of the Environmental Permits.
- Coordinate Partnering meetings with the contractor, subcontractors, MDSHA Management, WVDOH, FHWA, agency stakeholders and inspection personnel.
- Identify and document potential claim issues.
- Schedule and coordinate the Semi-Final Inspection.
- Prepare and monitor the completion of the Project's Final Punch List.
- Schedule and coordinate the Final Inspection.
- Coordinate the preparation of the final audit and payment.

## Design Coordination

During the design phases of the I-81 Improvement Project, the MDSHA District Office has been and will continue to coordinate with planning and design staff by reviewing construction plans for constructability, reviewing construction quantities, reviewing and/or writing construction specifications, and estimating contract construction durations. A comprehensive set of bid documents will be produced that will permit efficient and timely completion of the Project.

## Project Construction Inspection

The MDSHA District Office will provide Project Engineers to serve as the on-site construction managers for each construction contract. Working for the Project Engineers will be sufficient Construction Inspectors to ensure that a quality project is being delivered. Discipline leads or technical specialists may be assigned to assist the field staff on an as needed basis. Discipline leads or technical specialists may be MDSHA personnel or consultant personnel.

## Project Start-up

The Construction Phase starts with Contract Award and Execution of the Contract. Once all parties have executed the Contract a Preconstruction Meeting and Partnering Meeting will be scheduled by the Area Engineer.



The Preconstruction Meeting is a prerequisite for issuance of the Notice to Proceed. The Preconstruction Meeting allows the Construction Area Engineer to address the following:

- Contract scope,
- Policies, procedures, requirements and Specifications that may be unfamiliar to the Contractor,
- Potential construction difficulties and specialty items,
- Contractor's proposed means and methods and schedule of operations, and CPM schedule
- Coordination of Contract activities with utility companies and other interested parties.

Following the Preconstruction Meeting, provided that all requirements are met, the MDSHA issues the Notice to Proceed. The items that must be complete to issue a Notice to Proceed include:

- Contract executed,
- Preconstruction Meeting held,
- Approved CPM Schedule. This can be the full baseline CPM or the first 90 days of a CPM schedule depending on the contract,
- Verification that DBE goals are satisfied,
- Completion of any special conditions or requirements for a particular contract.

The Notice to Proceed specifies the date, on or before, which the Contractor is expected to begin work. Time charges will begin on the date work starts or the date specified in the letter, whichever comes first.

### **Subcontracting**

The Contractor may secure an additional contracting firm (subcontractor) to perform a portion of the contract. When a contractor desires to sublet a portion of its contract, the subcontractor must be approved by the Assistant District Engineer for Construction. MDSHA must have satisfactory evidence of the subcontractor's competency and must be certain that the value of the work does not exceed the maximum allowable in the specifications governing the project. Responsibility for proper performance of the subcontractor remains with the Contractor, as a condition of his Contract with MDSHA. Specific requirements for subcontracting can be found in the MDSHA Contract Proposal and Contract Special Provisions.

### **Utility Adjustments/Relocations**

Utility adjustments and relocations are being handled as part of each construction project. Coordination will occur at the 65% Design Stage to involve each affected Utility Company. Once utility relocations or adjustments are determined, a Prior Rights determination will be made and the utility company will be requested to make the necessary utility adjustments or relocations. Work by the utility companies is anticipated to occur prior to Notice to Proceed of each Contract. Utility adjust or relocation cost will be determined by Prior Rights.

### **Progress Payments**

Payments to the Contractor for work performed on the Contract are based on monthly progress estimates. Progress estimates are prepared on a monthly basis, and include payment for work completed during the preceding period. Payment Information for the progress estimates is obtained by the field inspection staff. Quantity measurements for progress estimates are recorded on IDR's or recorded directly into MCMS. This information may be recorded by the Project Engineer or another individual assigned that task.



Project Record Books are an important part of the record keeping for the project. All entries in MCMS must be referenced to a specific numbered IDR identified to the person responsible for the data. All sketches and computations must be accurate. No erasures are permitted in the Ledger and Sketch Book, all corrections must be initialed and dated.

The following procedure must be used in preparing progress estimates:

- MCMS is used to calculate the quantities to be paid on the current estimate.
- No final quantities should be shown in the Sketch Book until approved and initialed by the Project Engineer. They must remain estimated quantities until final quantities have been agreed upon or that element of work has been completed
- After calculating all quantities and corresponding payments for the monthly estimate, the monthly estimate is submitted by the Project Engineer for review and then to the Office of Construction for processing.

The Contractor's signature is required on progress and final payment estimates. Within 10 days of receipt of a monthly estimate payment, the Contractor must pay its subcontractors and suppliers. The Contractor is required to submit a signed and notarized Little Miller Act form confirming that payment has been made to all Subcontractors and Suppliers in accordance with Prompt Payment requirements. Subsequent payments may be withheld if payment is not made to subcontractors and suppliers from previous estimates.

Periodic review of the contract documents and progress estimates will be performed by the MDSHA District 6 sketchbook office as well as MDSHA Office of Finance Audit personnel to ensure the measurements and payments to the Contractor are accurate.

### **Contract Changes**

Contract changes or change orders refer to any authorized revisions that affect the Contract after it has been awarded. Contract Change Orders include any modification of items, quantities, material requirements, specifications, changes in allotted contract time, or any other deviation from the scope of the original Contract. Change Orders pertain to both increases and decreases in units of work and can require the negotiation of new item prices. FHWA must be advised of changes on all federally funded construction contracts for the I-81 Improvements Project and may have to approve change orders on some contracts (FHWA to determine which Contracts) before they can be processed. Change orders, will be processed in accordance with the current MDSHA Change Order procedures.

Differing Site Conditions are another possible cause for contract changes. These conditions are also defined in the July 2008 Standard Specifications for Construction and Materials Book.

The Contractor is required to notify the Administration any time it encounters perceived differing site conditions. The inspector is charged with keeping detailed records for the potential Change Order recording date, time, location, and condition as soon as differing site conditions are identified. The inspector is also to note all equipment and labor that is idled due to the stoppage of work due to the differing site conditions.

Likewise if it becomes necessary for the Project Engineer to suspend work, the inspector must keep detailed records and note all equipment and labor that is idled as well as conditions of the project site, such as stockpiled materials completion percentages for all work completed. When work is ready to resume the negotiated Change Order reimburses the Contractor costs incurred due to the suspension.



Change Orders are also used to make payment to the Contractor due to the settlement of a claim or delays to the project completion date. Value Engineering Change Proposals, also require payment through a Change Order, if accepted.

The Change Order Process requires the Contractor to provide written notice to the District Engineer any time they believe there has been a change to the contract or a change in the character of the work. Any time an inspector believes there has been a change to the contract, the Project Engineer must be informed and documentation of the change, from its origin through its resolution, detailed records must be kept. Before the Contractor performs any work that is considered a change, a Change Order must be negotiated. The items in a Change Order are paid in one of three ways: extension of existing items and quantities, Negotiated Change (Lump Sum), or Force Account. Definitions of these items and detailed requirements are found in the MDSHA July 2008 Standard Specifications for Construction and Materials.

### **Change Order Processing**

The Area Engineer has the responsibility of preparing the Change Order in the approved format including attaching all back-up documentation. The completed Change Order is forwarded to the District Engineer for signature and submitted to the Office of Construction for approval and processing. Change Orders must be approved by both parties to the Contract; MDSHA and the Contractor.

Payment for work done through Change Orders can be by the unit prices contained in the Contract or renegotiated unit prices, if justified, by single price for the change or Lump Sum payment, or by Force Account. Force Account payments are costs based on the actual labor, equipment and materials with allowable markup to complete the work contained in the Change Order.

### **Partnering**

The construction partnering concept for the I-81 Improvement Project is based on trust between MDSHA and the successful Contractors. To this end, the MDSHA Area Engineer, Project Engineer, WVDOH representative and MDSHA Project Manager will meet shortly after award of each contract (prior to the formal preconstruction meeting) with the Contractor to establish the key elements of Formal Partnering: Partnering Charter, Project Goals, Issue Resolution Chart and Escalation Ladder as a means to discuss/resolve key project issues and to establish an open line of communication on each contract. MDSHA will commit to prompt resolution of contract issues as they occur and will encourage the Contractor to share creative solutions and suggestions to improve contract schedules, with no compromise in quality, as the contracts progress through construction. Monthly Progress Meetings will be held on the individual contracts at which time all open issues and potential problems will be reviewed. Contractors not familiar with the MDSHA approach to contract management and partnering, separate Partnering Meetings will be scheduled on a Monthly basis or as needed.

### **Claims Management**

One objective of a good construction administration program is the avoidance of Contractor Claims during construction. Despite the best efforts of both parties, however, there will be times when formal Claims will be submitted to the Administration. Filing of Claim by Contractor is detailed in GP-5.14 of the 2008 Standard Specifications for Construction and Materials. It is imperative that the Project Engineer and inspection staff maintain detailed documentation of all potential claim issues, including documentation of the initial notification. Detailed documentation is needed to verify time and budget impacts of the claim.



## 6.0 COST, BUDGET AND SCHEDULE

### COST AND BUDGET

In accordance with FHWA requirements, a separate financial plan has been developed for this project. Please refer to the I-81 Improvements Project Initial Financial Plan for more information on the cost, budget and cash flow for this project.

### SCHEDULE

As noted in the Initial Financial Plan, the project schedule is subject to change based on the availability of funding.

#### Planning

The project planning study started in 2001. Informational public workshops were held on November 5, 2001, November 8, 2001 and May 26, 2004. An Alternates Public Workshop was held on June 20, 2002. Planning for the entire corridor was culminated with the signing of the FONSI on February 25, 2010

Milestone	Schedule	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Project Planning (PP) Start	07/09/2001										
Informational Public Workshop	11/05/2001										
Alternative Public Meeting	06/21/2002										
Coordination with Local Agencies	07/2002-09/2004										
Informational Public Workshop	05/26/2004										
Location Design Hearing	10/06/2004										
Technical Studies	10/2004-02/2010										
Location Approval	02/25/2010										

#### Phase 1

Phase 1 is currently 100% designed with an advertisement date in May 2016. It is fully funded for construction from FY 2017-2020 with an expected completion date of June 2019.

Milestone	Date	2016	2017	2018	2019	2020	2021
Advertisement	May-16						
Bid Opening	June-16						
Notice to Proceed	August-16						
Construction complete	June-19						
Project Close out	June-21						



**Phase 1A**

Phase 1A is 100% designed and was advertised on March 22, 2016. It is fully funded for construction from FY 2017 - 2018 with an expected completion date of June 2017.

Milestone	Date	2016	2017	2018	2019
Advertisement	March-16				
Bid Opening	April-16				
Notice to Proceed	July-16				
Complete Construction	June-17				
Project Close out	Jul-19				

**Phases 2, 3 and 4**

Phases 2, 3, and 4 will be candidates for design, right-of-way, and construction funding in future years CTP. The schedule for these phases will be updated as funding becomes available.

Unfunded Breakout Projects	Schedule Year	Completion Year																	
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Phase 2	2017-2022																		
Phase 3	2023-2028																		
Phase 4	2029-2034																		

## 7.0 PROJECT REPORTING AND TRACKING

### SUMMARY

The project reporting and tracking system will collect, assess and maintain project status information and data that is timely, independent, and accurate. The focus will be on utilizing existing MDSHA reporting mechanisms to provide project reporting and tracking.

Reports will be prepared to assess status and track progress on procurement, costs, budgets, schedules, property acquisitions, design status, construction progress, change orders, payments, DBE utilization and many other items for the project. These reports will cover periods ranging from a month to a year, and will typically be prepared for each phase and will be aggregated into a status report for the entire I-81 Improvement Project.

### STATUS REPORT

#### Status Summary

The status summary will briefly outline the current status of the projects, including any major issues that have an impact on the I-81 Improvements Project Goals and Objectives (see Section 2). The status will typically include:

- Current overall project completion percentage vs. latest approved plan percentage.
- Delays or exposures to milestone and final completion dates including the reasons for the delays and exposures.
- Significant scope of work changes.
- Significant items identified as having deficient quality.
- Significant safety issues.

The Status Summary will be prepared every six months for funded phases, with one of the reports being coincident with the annual Financial Plan update.

#### Outstanding Issues / Action Items

Issues requiring action and direction for resolution will be highlighted in this section. In general, issues that could have a significant or adverse impact to the project's scope, budget, schedule, quality, safety, and/or compliance with project requirements will be included. Actions will be assigned to specific individuals along with desired resolution dates.

#### Project Schedule

Schedule updates reflecting the current status of the overall Project as well as each Phase of the Project will be included in this section. The master schedule will be integrated such that any delays occurring in one activity will be reflected throughout the entire program schedule. Information on the current overall project completion percentage vs. latest approved plan will be provided as will a status description of each of the major or critical elements.

#### Project Budget

Information relative to the current budget, funding status, and expenditures for each Phase and the overall Project will be included. Underruns, overruns, claims and change orders will be detailed.

**Project Quality**

The Quality activities performed during the reporting period and any significant will be reported. Deficient items noted will be accompanied by details of the deficiency and corrective actions necessary.



## 8.0 INTERNAL AND STAKEHOLDER COMMUNICATIONS

### OVERVIEW

The MDSHA recognizes the importance of both internal and external communications throughout the duration of the Project. The goal of maintaining an efficient internal communication process is to ensure that all levels of the project team, from the field level to the MDSHA executive management level have the most up to date and accurate information at all times. This will enhance decision-making as well as continue to maintain a high level of trust with external Project stakeholders.

### INTERNAL COMMUNICATIONS

The project team is organized to allow for efficient and effective internal project communications. Participants in internal communications include planning, design and construction personnel, MDSHA executive leadership, and public outreach staff. Although also considered stakeholders, FHWA and WVDOH (due to the work being performed in WV as part of Phase I) will be included in the Internal Communications protocols.

During planning and design, the Project Manager will serve as the primary facilitator for internal communications.

During construction, the Project Engineer for each Phase will become the primary facilitator for internal communications regarding that Phase. The Project Manager will remain as the overall coordinator. Both will attend critical project coordination meetings, and be copied on minutes from individual construction contract and coordination meetings to ensure a thorough understanding of project issues and schedule, and that all necessary information is identified and effectively communicated with parties that need to receive it.

### PROJECT STAKEHOLDERS

The I-81 Improvements project team identified and began regular communication with the project stakeholders as part of the environmental process leading up to the FONSI. Key project stakeholders included:

- Elected and Government Officials
- Business Groups
- Trucking Community
- Environmental Groups
- Agriculture Community
- Residential Communities
- Property Owners
- Emergency Service Providers
- Media

Additional stakeholders are likely to be added as the Project proceeds. Utilizing the Project Communication Plan discussed in Section 15, the project team will proactively and responsively communicate important information about the Project on a regular basis. Additionally, opportunities for stakeholders to interact with the Project Team will be provided through normal MDSHA Public Outreach conduits including the MDSHA website, public workshops, community meetings, and targeted stakeholder meetings.

During planning and design, the Project Manager will be the primary point of contact for the project stakeholders and will be responsible for ensuring that all stakeholder concerns are promptly addressed. Once phases of the project move into construction, the Project Engineer will have primary responsibility for Stakeholder involvement, but will be supported by the Project Manager for Project-wide issues.

## COMMUNICATION TOOLS

### Communication Protocol

The communication protocol will describe the chain of communication that shall be followed during planning, design and construction of the Project.

The contact list will include contact information for the Project Manager, Project Engineer, other key personnel, and public outreach staff. A contact list of known project stakeholders will also be included.

Adhering to the communication protocol will ensure that the most up to date information is disseminated, that the right personnel can be contacted quickly to resolve issues, and will also ensure that the proper personnel are aware of the communication and are able to share it accordingly.

### Regular Project Meetings

Regularly scheduled team meeting will be used through planning, design and construction of the Project to ensure that all team members and stakeholders are kept informed. In most cases, agenda, minutes, and action items will be distributed to the team.

### Document Management System

MDSHA will use ProjectWise as the electronic document management system for this Project. This system is widely used by MDSHA, consultant and contract staff for all MDSHA projects. It allows efficient storage and transfer of information as well as the ability restrict access to sensitive or confidential information.



## 9.0 PROJECT MANAGEMENT CONTROLS

### SUMMARY

The purpose of Project Controls is to facilitate the management, cost, and schedule integration through all phases of the I-81 Improvement Project. Project Control systems have been established to ensure compliance with the Project Goals discussed in Section 2.

### SCHEDULE

This section describes how the MDSHA monitors and reports progress on the Project. In addition, it describes the types of schedule reports that will be generated and used to communicate schedule information to the MDSHA and outside organizations.

The Project will be monitored in accordance with Sections 109 and 110 of the MDSHA Standard Specification for Construction and Materials, including the use of Primavera Project Planner scheduling software (P6). This software package meets the needs of the Project and provides the capabilities necessary to control and monitor the work. All Critical Path Method (CPM) schedules generated by the contractors will utilize P6 software to assure uniformity and compatibility. The MDSHA will work closely with the contractors to ensure that schedule submittals meet the contractual requirements.

Schedule Analysis, Schedule Updates and Revisions, and Schedule Monitoring and Reporting will all be performed in accordance with Sections 109 and 110 of the MDSHA Standard Specification for Construction and Materials.

### PROJECT BUDGET

To maintain the budget, the project cost estimates will be monitored and adjusted based on the actual awarded and pending contract amounts. The purpose of closely monitoring the budget is to allow for early identification and rectification of potential variances from the established Financial Plan.

Contract changes are closely monitored to maintain the Project budget. Contract changes are funded from the Project contingency.

### FUNDS MANAGEMENT

Details regarding the funding sources, allocations, timing, cost estimates, schedules, projected cash flows and other funding factors are included in the Initial Financial Plan developed for this Project in accordance with FHWA requirements. The Financial Plan is reviewed and updated as required annually, at a minimum, or as needed to reflect changes from the initial plan.

### PROGRESS REPORTING

Progress will be reported on a regular basis using the Project Report and Tracking tools discussed in Section 7.

## DOCUMENT CONTROL

Document Control will be managed by the project team in accordance with standard MDSHA practices for planning and design work by the relevant design and planning. Once each Phase of the contract moves into construction, the Project Engineer(s) assigned by District 6 will be responsible for document control on each phase.

## AUDIT PLAN

### General Objectives of The Audit Plan

The District 6 Office, MDSHA Regional Construction Engineer, MDSHA Office of Audits, FHWA and WVDOH (as applicable to Phase I) will perform periodic reviews and audits of the Contracts. The overall objectives are to:

- Provide independent audit assurance that contractors and consultants are compensated in accordance with the agreement and contract terms;
- Identify potential financial-compliance issues in early stages of the Project to facilitate timely corrective action;
- Support MDSHA Project Management as needed.

### Audit Training For Project Staff

MDSHA's Office of Audits will regularly assess if formal or informal training on audit requirements and procedures would be beneficial to overall project administration, and if necessary coordinate or conduct such training.

### Construction Activities

Detailed review of payments are made to ensure compliance with the contract terms.

- Audit Oversight:
  - MDSHA's Office of Audits will perform compliance audits on a regular basis.
  - Regular audits and reviews are conducted to ensure that:
    - Monthly estimates are valid and accurate;
    - Proper security is in place in project offices/trailers where contract documents are housed and where contract estimates are prepared;
    - Project inspection records are maintained in accordance with MDSHA policies and procedures;
    - Activities performed and recorded by Quality Control Inspection staff are properly reviewed;
    - Payments are in accordance with procedures outlined in the Contract Documents;



- Project expenditures are appropriate and are properly coded as to federal/state participation;
  - Contractors are in compliance with the Davis-Bacon Act requirements;
  - DBE/WBE/MBE participation is monitored and goals are being met;
  - Contractors comply with Federal and state public ethics provisions.
  - All findings and observations noted during the periodic reviews and audits will be communicated to the Assistant District 6 Engineer for Construction, who will take action that may be deemed necessary.
- District Contract Finals Team
    - Develop a comprehensive audit program for the construction phase of the Project that addresses the areas mentioned above;
    - Perform regular on-site reviews related to the construction effort, and make recommendations for areas where improvements may be needed;
    - Ensure there is a mechanism in place to address areas of non-compliance.
    - Sketch book review reports will be regularly reviewed for any items questioned by the reviewer to determine the status of any issues and ensure that issues are resolved.
    - Training for project Engineers, and construction staff on audit related requirements is provided as necessary.

## CHANGE ORDERS

The party responsible for review and approval of each Change Order depends on the scope and cost of the Change Order and the cumulative amount. Levels of change order approval are stipulated on the Change Order Document. A review of the change order process is performed during the regular construction audits and reviews.

For those portions of the Project to be constructed for WVDOT, the MDSA will lead the Change Order review process but will obtain WVDOT concurrence before final approval.

FHWA will be involved in change order review and approval for all portions of the I-81 Improvements Projects that include federal funding.

## CLAIMS

All potential claims are reviewed by the Project Engineer who evaluates entitlement and prepares a recommendation to the Area Engineer. The Area Engineer then presents a recommendation to the Assistant District Engineer for Construction who will then respond and act according to the Contract provisions.

For those portions of the Project to be constructed for WVDOT, the MDSA will coordinate the claims review process with WVDOT.

FHWA will be involved in claims review and approval for all portions of the I-81 Improvements Projects that include federal funding.



## DBE/WBE/MBE COMPLIANCE

DBE/WBE/MBE Programs are discussed in greater detail in Section 16. The following represents a summary of the program oversight provided by MDSHA.

### District 6 Oversight

DBE/WBE/MBE compliance is the responsibility of the Project Engineer. This includes, but is not limited to, the following:

- A) Reviewing requirements with the Contractors, including subs;
- B) Verifying payroll checks performed by the project staff.
- C) Resolving issues raised by Contractors employees with respect to treatment and pay.

The Project Engineer monitors DBE subcontractors on each contract to ensure the DBE's presence on the job and that they are supervising their own workforce in accordance with the terms and conditions of their approved subcontract.

Additionally, payments made by DBE's to non DBE's are monitored for compliance with the DBE requirements.

### Independent Oversight

MDSHA's Office of Audits, in conjunction with the project staff performs regular audits to ensure:

- D) DBE/WBE/MBE goals are being met;
- E) Dollar amounts paid to DBE/WBE/MBEs agree with amounts anticipated; and
- F) Reports of unfair practices and/or fraud are investigated timely and are handled appropriately.

## UTILITY AUDITS

The Project Engineer, with assistance from the District 6 Utility Engineer, is responsible for processing any utility relocation tasks on the Project. This includes review of utility relocation project plans and budgets. MDSHA ensures that the relocation work is performed according to State and Federal requirements and that invoicing are timely submitted in the proper format.

## RISK MANAGEMENT

For the I-81 Improvement Project, this risk management process will be undertaken for each Phase of the project as part of the preliminary engineering and procurement method selection process. The risk assessment will include the identified risks, the relative probability of occurrence, and the relative impact of the risks. The area of effect of the occurrence of the risk is assigned to categories such as time, cost, public relations, etc. After discussion of potential risk mitigation methods, the risk is allocated to the MDSHA, the contractor, or to both.

## 10.0 DESIGN QUALITY ASSURANCE/QUALITY CONTROL

### SUMMARY

The MDSHA will follow traditional design quality assurance and quality control measures for the I-81 PMP Project. The MDSHA Project Manager overseeing the design effort will be responsible for ensuring a quality design is produced. Consultants and in-house staff performing design will follow their company or department based design quality procedures.

Should any portion of the project be procured using innovative procurement methods, the requirements for design quality will be carefully considered and the requirements for design quality managed will be added to the contractor's responsibility as appropriate. In such cases, MDSHA may retain design QA and/or audit activities.

### DESIGN QA/QC PROCESSES

Although typically defined by the individual departments and/or consultant firms performing the work, all QA/QC plans will include the following components:

- A written Design Quality Control Plan (DQCP) that applies to all elements and subconsultants.
- An organization structure and reporting requirements that demonstrate that quality control personnel have sufficient independence to allow them to be primarily concerned with quality.
- Detailed procedures for:
  - Calculations
  - Plans
  - Specifications
  - design coordination
  - construction coordination,
  - shop drawings,
  - material approvals,
  - document control.
- A Complete check of all design and other calculations, plans and specifications performed by experienced design professionals that have not participated in any of the design up to the checking process.

### CERTIFICATIONS

All calculations, plans, and specifications will be certified for conformance with the DQCP.

All calculations, plans, specifications and other technical documents for inclusion in the contract documents will be signed and sealed by the Professional Engineers licensed in the State of Maryland responsible for the design. Landscape plans will be prepared, signed, and sealed by a Landscape Architect licensed in the State of Maryland. Reforestation plans and application will be signed and sealed by either a Maryland Licensed Landscape Architect, Licensed Forester, or a qualified professional that is certified by the MD DNR/Forest Service.

For those portions of the project within West Virginia, the equivalent West Virginia certifications will be required.



## 11.0 CONSTRUCTION QUALITY ASSURANCE/QUALITY CONTROL

### OVERVIEW

Quality Assurance/Quality Control (QA/QC) is not only an integral part of the construction process by the Project Contractors but is also an important part of the overall construction management process for MDSHA. MDSHA's Office of Material and Technology (OMT) will coordinate with the Project Engineers, to provide and enforce applicable QA/QC testing procedures on site and in the producer's plants. The process will start with OMT reviewing and approving sources of supply for materials, mix designs, job mix formulas, etc. The process will continue with quality control materials testing, compaction testing, and other applicable test for all construction materials including hot mix, concrete, soil cement, aggregates, soils, structural steel, and precast concrete elements. Established specifications and procedures are anticipated to be followed on the I-81 Improvement Project with no major changes. The testing procedures and frequencies are documented in OMT's Materials Sampling and Testing Guide.

Generally, work in Maryland will follow standard MDSHA policies and procedures. Work in West Virginia will follow standard WVDOH policies and procedures.

### QUALITY OVERSIGHT

The primary responsibility for quality control lies with the MDSHA's Project Engineer and inspection staff, including verification of products, subcontractors, fabricators, suppliers and vendors. The Regional Construction Engineer (RCE's) role is to provide Quality Assurance of the work performed in Maryland, WVDOH will provide staff members to perform Quality Assurance of the works performed in West Virginia. In accordance with MDSHA procedures, OMT will perform Owner Verification Testing of materials for work in Maryland. WVDOH procedures will be followed for materials testing for work in West Virginia. All construction processes, procedures, materials and workmanship will be inspected by MDSHA's inspection QC staff for work in Maryland. In accordance with WVDOH procedures, the contractor will be responsible for QC on work in West Virginia.

On a daily basis, the Project Engineer and the Quality Control inspection staff will assure project quality through full time inspection of the work and monitoring field testing. It is the on-site construction management teams responsibility to determine the Contractor's compliance with the contract documents, specifications, and specified quality requirements and to immediately take action to correct any item which is found to be in non-compliance.

An Independent Assurance Program for materials will be conducted by the OMT to validate that the Quality Assurance Quality Control Processes are in compliance with the contract documents, MDSHA and FHWA requirements. The Independent Assurance Program will be accomplished by conducting systematic and random tests in accordance with the OMT Materials Sampling and Testing Guide requirements. It is expected that any issues that arise from the project inspections or the Independent Assurance Program will be addressed immediately by the Contractor and the on-site inspection staff. Similar procedures, in accordance with WVDOH policies, will be followed for work in West Virginia.



## CONSTRUCTION INSPECTION

Once Construction begins the work is governed by the Contract Documents, Standard Specifications, Special Provision Inserts, Plans, Special Provisions and supplementary documents as all are essential parts of the Contract. Note that in Maryland, the MDSHA will provide construction quality control. In West Virginia, the contractor will provide construction quality control.

In the event of any discrepancy between the various Contract Documents, the governing order from highest to lowest shall be Special Provisions, Plans, Special Provision Inserts, and Standard Specifications as stated in TC-3.01 Governing Order of Contract Documents.

Upon the initiation of construction activities, the on-site construction staff, consisting of the Project Engineer and inspection staff, begins their work. Starting with the first chargeable day, daily activities are recorded on Inspector's Daily Reports (IDR's) which, when compiled, create the Construction Daily Log, the official contract record. The IDRs and daily log include the following information:

- Weather,
- The type, location, and quantities of all work performed,
- Personnel and equipment on site,
- Materials received or approved,
- Milestone dates, such as traffic pattern shifts or partial opening of the Project,
- Listing of visitors,
- Documentation of accidents within the work zone,
- Important Contract dates, such as first day of work,
- MBE / DBE contractors on site
- Other important contract information.

The project inspection team, headed by the Project Engineer, inspects the Contractor's work on a full time basis, prepares daily reports of project activities and maintains all official records identified above. Project inspectors spend most of their time in the field inspecting the Contractor's work in adhering to all applicable plans, contract provisions, standard specifications and other contract requirements. Inspectors are expected to exercise "construction control", which means using a combination of experience, training, judgment and common sense in inspecting the construction from beginning of construction until the end. When needed, project inspectors will contact the Project Engineers to assist them in making unusual or complex field decisions. Inspectors are encouraged to photograph progress on all phases of the construction and are expected to adhere to the MDSHA's rules for personal safety.

In addition to the daily oversight of the construction activity, the field staff will also serve a role in the public relations effort for the Project. Field personnel will be in constant contact with the public and will play an important role in identifying issues and channeling them to the appropriate individuals to answer or resolve them.

## CONTROL OF MATERIALS

Materials are defined in the July 2008 Standard Specifications for Construction and Materials. This includes both temporary materials used for construction and materials that become a permanent part of the project. For the I-81 Improvement Project, as with all MDSHA projects, material approval is given by the Office of Materials and Technology. For those portions of the work in West Virginia, WVDOH approval procedures will be followed.



Sources of materials should be approved well in advance of the time of use and ideally are approved prior to the Notice to Proceed. Written approval of source of materials shall be obtained with copies maintained in the project records by the inspection staff. After the source has been approved, and before they are delivered to the site, the materials will undergo preliminary testing. Test results are maintained as part of the contract records. Final approval of all materials, however, is always dependent upon satisfactory performance in the field. Verification of a material's satisfactory performance is obtained from field testing that can be classified into the following categories:

- General observation of the material's performance as witnessed by the inspector or other qualified MDSHA employee.
- Job control tests
- Random sampling tests

The Project Engineer is responsible for making certain that inspectors keep detailed records of all tests, procedures used, results and the relationship of each test to others. A record must be maintained identifying the location of all tests, whether passing or failing, and whether the test was a job control test or a random test. Detailed policies and procedures relating to material approval are found in the OMT Random Sampling and Testing Guide.

## 12.0 REAL ESTATE RIGHT OF WAY

### SUMMARY

The development and construction of the I-81 Improvement Project requires the acquisition of real estate with no displacement of residential or commercial properties. Approximately 46 parcels totaling 31.7 acres with a value of approximately \$27 million are required for the Project. The project is being led by the Maryland State Highway Administration but will require cooperation with the West Virginia Division of Highways.

Pursuant to the memorandum of understanding between MDSHA and WVDOH (see Appendix), the I-81 Improvement Project will require joint cooperation between the two agencies for improvements related to the I-81 bridges over the Potomac River and associated adjacent roadways. Cooperation includes property acquisition in West Virginia to support the improvements and construction activities.

All property to be acquired for the I-81 Improvements Project in Maryland and West Virginia will be accomplished in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, applicable Maryland and West Virginia law and normal MDSHA and WVDOH policies and procedures.

### ACQUISITION

MDSHA will acquire the right of way needed for the project as identified by the limits of disturbance in the approved Environmental Assessment. MDSHA will acquire the ROW required in Maryland and the West Virginia Division of Highway (WVDOH) will acquire the right-of-way required in West Virginia, including easements and other property rights. MDSHA and WVDOH will each provide the staffing necessary to acquire ROW and deal with all ROW issues during the acquisition phase.

**Notification** – Property owners and tenants will be notified by MDSHA and WVDOH real estate representatives who will provide information about the Project and answer questions.

**Appraisal** – As mandated by law, property owners will receive fair market value for any land and/or buildings that they are required to sell. A qualified, licensed independent appraiser will visit the property and consider recent sales in the same community or neighborhood, as well as current building costs and land values. Property owners can also provide the appraiser with information they feel may help estimate the value. The appraisal is then completed and approved by an independent reviewer. Property owners may, at their own cost, obtain their own appraisal for consideration.

**Negotiations** – After the appraisal, a MDSHA or WVDOH real estate representative will contact the property owner with information regarding the amount of land needed, the approved real estate appraisal, and the compensation being offered. The property owner will also receive a written confirmation of the offer and be given time to consider the offer.

When an offer is accepted, both parties (MDSHA or WVDOH and the seller) sign a binding contract. The deed is signed over when the check is delivered at settlement (usually within 90 days).



If the offer is not accepted, Maryland and West Virginia state law recognize the owner's right to refuse the purchase offer and to have the value of the property established by the courts. However, MDSHA and WVDOH still have the right to acquire property needed for the project. The right of a government to take private property for public use is called "eminent domain." Application will be made to the court in the respective county, indicating the need for MDSHA and WVDOH to obtain possession of property needed for Project construction. This allows MDSHA to proceed with the Project while the property valuation discussions continue between the property owner and MDSHA or WVDOH. If a settlement is not reached, just compensation will be determined through the Maryland or West Virginia court system, as appropriate.

## DEMOLITIONS

There are no displacements identified for this project.

## SCHEDULING

A schedule for right-of-way acquisition activities for each individual needed parcel will be developed and tied to the project Phases and overall project schedule. The schedule will track the status of acquisition for the properties and the timing for those properties to be acquired.

The status of property acquisitions will be reviewed and discussed during each project team meeting.

MDSHA and WVDOH, as appropriate, Real Estate Services ensure all right-of-way needs are secure prior to issuance of construction contractor's notice to proceed or in accordance with a ROW availability schedule. If properties are not available by the dates shown in the ROW Availability Schedule, the contractor will be required to exercise good faith efforts to work around any delay and to minimize any time or cost impacts associated with property acquisition delays.

## 13.0 SAFETY AND SECURITY

### SUMMARY

The MDSHA is committed to safe construction of the I-81 Corridor Project and emphasizes the safety and security of the Contractor's staff, the traveling public, adjacent property owners, the MDSHA staff and its representatives, the WVDOH staff, and the staff of numerous other agencies associated with the I-81 Improvement Project.

### SAFETY AND SECURITY PLANS

For the I-81 Improvement Project, the contract documents will require that the Contractors perform all actions necessary for safety and be solely and completely responsible for conditions on the Site, including safety and security of all persons and property on the Site during the Contract. The MDSHA staff and its Consultants will abide by Construction Directive 07220.100.28 – Construction Work Site Safety Regulations. The Contractor is fully responsible for the safety of workers engaged upon the Project. The MDSHA project manager is responsible for the safety of his employees and all other persons working at or visiting the Site and the protection of the public in the vicinity.

The Contactor will be responsible for conducting their work in conformance with the standards established by USDOL, OSHA, MOSH or other health and safety agencies.

Should future projects utilize a delivery method other than the Design-Bid-Build process, additional safety plans may be required and will be added to this plan at that time.



## 14.0 TRAFFIC MANAGEMENT

### OVERVIEW

MDSHA is responsible for developing, implementing and monitoring Traffic Management techniques for the I-81 Improvements Project. The primary goals for upgrading of this 12-mile corridor in Maryland in a safe and efficient manner are:

- minimizing work zone impacts;
- expediting construction progress;
- minimizing disruptions to local businesses and communities;
- maintaining pedestrian and bicycle access at interchanges;
- providing proactive public outreach for upcoming work zone impacts; and
- maintaining public trust and integrity.

Phase-specific TMPs will include an assessment of work zone impacts, localized mitigation strategies and site-specific Maintenance of Traffic (MOT) plans. The phase-specific TMPs will be congruent with each other as necessary based on timing of each phase. The Phase I TMP has already been developed and is included in Section 20, Appendix.

It is anticipated that two travel lanes in each direction will be maintained throughout construction during weekday peak periods. However, temporary, off-peak single lane closures may occur during various phases of construction to expedite construction. Impacts will be minimized by temporarily closing lanes in the timeframes with relatively low traffic volumes.

### POLICIES, STANDARDS AND GUIDELINES

The Traffic Management components will adhere to MDSHA policies, standards, specifications, guidelines and best practices. Specifically, each project will include elements in the contract documents that sets forth the Traffic Management and MOT requirements for the Contractor. The contract documents will include:

- Design Manuals, Standards, Specifications, Special Provisions and Publications to be used;
- Requirements for the project-specific MOT plan;
- Requirements for coordination with other contractors, police, emergency services and other agencies;
- Requirements for the analysis methodologies that can be used including mobility thresholds;
- Requirements for monitoring of actual operations and revisions to the MOT plans, if needed;
- Requirements for the phased MOT plans;
- Limitations for road closures, detours and lane closures for area roadways; and
- Requirements for submittals and review of the MOT plans.

A preliminary list of key MDSHA documents include:

- Standard Specifications for Construction and Materials;
- Supplemental Specifications and Provisions;
- Book of Standards for Highway & Incidental Structures;
- Bicycle Policy and Design Guidelines;
- Maryland Transportation Management Plans: Guidelines for Development, Implementation and Evaluation;
- Maryland Manual on Uniform Traffic Control Devices;
- Construction Manual;



- Accessibility Guidelines for Pedestrian Facilities along State Highways;
- Design-Build Manual;
- Sign Standard Book; and
- Traffic Control Devices Design Manual

### ROLES AND RESPONSIBILITIES OF TRAFFIC MANAGEMENT STAFF (TMS):

MDSHA will initiate the development of the I-81 Project TMPs based on input from representatives of FHWA, all affected state and local agencies, first responders (i.e. police, fire / rescue) and other key stakeholders. MDSHA will manage development, review and implementation of the TMP specific to each phase of the project. Stakeholders may include those from agency offices in traffic, construction and maintenance. MDSHA will review MOT plans at various design reviews including final review to ensure compliance with MDSHA specifications, standards and mobility thresholds. Coordination with other state and local agencies will occur during design and construction regarding the placement of temporary traffic control devices within their jurisdiction. Work hours, allowable lane closure periods, special events and other restrictions will be coordinated with other state and local agencies as well.

MDSHA will lead the development of an Incident Management (IM) plan for crashes occurring within the corridor, including accident prevention strategies, emergency procedures, reporting requirements and mitigation strategies. The IM plan will solidify and document a coordinated incident management approach with specific resources throughout construction. Quick clearance of incidents and adequate passage of emergency vehicles through the work zone (during each phase of construction) will be primary focus areas. Agreement on how incidents and crashes within the work zone will be managed in multiple jurisdictions will facilitate efficient coordination, clearance and evaluation. During construction, MDSHA will ensure contractor coordination with local and state emergency management agencies to notify them of all temporary access issues and maintain emergency response times.

MDSHA will host review meetings before finalizing MOT plans, incident management procedures, coordination activities and ITS devices for each major traffic switch throughout construction. MDSHA will host pre-traffic switch meetings and other coordination meetings with representatives from FHWA, state and local agencies and contractors. This coordination will ensure all temporary traffic control devices are coordinated across jurisdictional boundaries and multiple construction contracts. MDSHA will facilitate coordination amongst the various agency Traffic Operation Centers (i.e. CHART) to coordinate the specific messaging to be placed on variable message signs and other ITS devices as required during construction.

In accordance with 104.18 of the MDSHA Standard Specifications for Construction and Materials the contractor for each construction contract will be required to assign a certified Traffic Manager (TM), whose responsibility it is to supervise and continuously monitor all MOT activities. MDSHA will verify that approved MOT plans are implemented correctly and safely as well as conduct regular work zone safety inspections to verify proper maintenance of temporary traffic control devices. MDSHA will be on-site frequently, including during night-time activities, to observe traffic operations during construction and advise the contractor's TM of any non-compliance issues or safety concerns. MDSHA will notify the contractor of any traffic control deficiencies observed. MDSHA will verify that the contractor has coordinated MOT activities with local schools, churches and special event activities during construction.

MDSHA will be responsible for coordinating with the media and public outreach staff of all affected jurisdictions to provide information to the public before each major traffic switch. MDSHA will provide advance notice of traffic pattern changes, periods of lane closures, traffic delays, alternate routes and work zone crashes. The goal is **no surprises** to motorists, pedestrians, bicyclists, nearby state and local agencies, businesses, other stakeholders and elected officials.



## REPORTING

A monthly report of ongoing and upcoming MOT activities and coordination efforts will be prepared by MDSHA and distributed to FHWA, state and local agencies and other key stakeholders. Immediate notification of all issues, incidents, major traffic delays, etc., will also be provided.

## 15.0 PROJECT COMMUNICATIONS (MEDIA AND PUBLIC INFORMATION)

### OVERVIEW

The MDSHA recognizes the importance of proactive and responsive project communications throughout planning, design and construction of the I-81 Improvements Project. Effective communication with both the public and the media will achieve credibility and trust throughout the entirety of the project.

From the inception of the project, the MDSHA has stressed the importance of project communications in an effort to engage and inform the public. As the project continues and construction commences, the importance of proactive and responsive project communications will increase as the project interfaces with the public each and every day.

MDSHA's Office of Customer Relations will be the primary conduit for media and public information and will serve as the day to day point of contact for the media. The Project Manager and Construction Manager(s) will assist by working with the project staff to obtain responses to inquiries, status updates, and timelines for critical activities. The team will log, coordinate response, track the status of requests for information and complaints, and identify opportunities to proactively disseminate information to the public.

Project Communications with the Media and Public can generally be grouped into proactive and reactive communications, as further described below.

### PROACTIVE COMMUNICATIONS

#### Project Website

MDSHA's website will provide the latest information on the project. Planning and design status will be kept up to date, and once construction commences the project website will provide updates on construction progress, maintenance of traffic activities, and general project information. The website will also have contact information for any questions or requests that the public or media may have.

#### Media Updates and Briefings

The project will work with MDSHA OCR to regularly update the local media on the status of the project. These updates may be in the form of press releases, in-person briefings, or community meetings as dictated by the needs of the project and community.

#### Public Workshops

As necessary, the MDSHA will conduct project workshops to allow the community the opportunity to be updated on all facets of the project and to provide input. The public will be notified of the workshop through advertisements, flyers, media articles, and the project mailing list.

#### Project Update Meetings

MDSHA will schedule Project Update meetings prior to construction to provide focused updates to the community, and provide an opportunity for discussion, questions, and answers in areas of most importance to the community. As need, additional meetings will be schedule to allow the public regular opportunities to learn what has recently taken place on the project and discuss upcoming work.



## REACTIVE COMMUNICATIONS

### Urgent Communications

When urgent issues arise, typically during construction, the Project Manager and/or Construction Manager(s) will provide rapid, accurate information to MDSHA OCR and Executive Level Management (if necessary). As appropriate, information will be provided to the media, placed on the project website and disseminated through social media. If additional steps are needed, MDSHA OCR will identify the appropriate communications strategy to ensure that the public at large and any specific stakeholders are provided accurate and timely information.

### Media Requests

MDSHA OCR will be responsible for day-to-day media inquiries. After a media request is made, the Project Manager will gather the requested information and provide it to MDSHA OCR for dissemination to the media.

### Stakeholder Requests

The Project Manager, Construction Manager(s) and MDSHA OCR as appropriate based on the stakeholder making the request will first respond to the stakeholder acknowledging receipt of the information request. After conferring with the appropriate staff, an appropriate and timely response will be provided. If the information is not immediately available, the stakeholder will be notified and provided with an approximate timeframe. All requests will be logged to ensure that each request is fulfilled.

## 16.0 CIVIL RIGHTS

MDSHA's Office of Equal Opportunity (OEO) has responsibility for planning, developing, implementing, monitoring and evaluating all Equal Opportunity Programs within the MDSHA. These programs include Equal Employment Opportunity and Affirmative Action (Title VII of the Civil Rights Act of 1964), Environmental Justice, Disadvantaged/Minority Business Enterprise Program (D/MBE), Contractor Compliance / On-the-Job (OJT) and Limited English Proficiency (LEP) (Title VI of the Civil Rights Act of 1964), and the Americans with Disabilities Act (ADA).

In order to fulfill this responsibility, the OEO works cooperatively with the agency's Equal Opportunity Officers assigned throughout the MDSHA's seven districts and the Hanover Complex.

The I-81 Improvements Project will utilize the OEO and relevant policies, procedures and guidance on this project. The individual programs under OEO are summarized below.

### TITLE VII - EMPLOYMENT DISCRIMINATION

It is the policy of the MDSHA to maintain a strong Equal Opportunity/Affirmative Action Program. MDSHA is committed to uphold the Governor of Maryland's policy for zero tolerance of any unfair employment practices as required under Executive Order 01.01.1995.19 Code of Fair Employment Practices. The policy states that all personnel actions concerning any employee or applicant for employment will be taken on the basis of merit and fitness, without regard to:

- Age
- National Origin
- Ancestry
- Race
- Color
- Political or Religious Affiliation, Belief or Opinion
- Creed
- Sexual Orientation
- Marital Status
- Mental or Physical Disability

Additionally, MDSHA adheres to the requirements of Title VII of the Civil Rights Act of 1964 which prohibits discrimination in employment based on race, color, religion and national origin. This commitment extends to all MDSHA programs and employment actions. Every MDSHA employee has the right to work in an environment that is free of both discrimination and any form of harassment. In strict compliance with Federal and State laws, any form of harassment, including sexual harassment, will not be tolerated.

Our goal is to promote employee involvement, teamwork, recognition and inclusion. As our workforce becomes more diverse, MDSHA will continue to promote Diversity Awareness Initiatives, sexual harassment training and other training experiences that will educate and enrich managers, supervisors and employees about their rights and protections.

Responsibility for implementation of the Title VII Program has been assigned to various key officials, managers, and Equal Employment Opportunity (EEO) personnel. However, all employees in MDSHA should work cooperatively in order to achieve equal opportunity and affirmative action throughout MDSHA.



## TITLE VI – ENVIRONMENTAL JUSTICE

The purpose of Title VI/Environmental Justice is to ensure non-discrimination in all MDSHA programs or activities receiving Federal financial assistance from the Federal Highway Administration. In accordance with 23 CFR 200, the MDSHA has established the OEO, with a designated individual who is responsible for assuring compliance with the provisions of Title VI of the Civil Rights Act of 1964, as amended and related laws, statutes, Executive Orders and regulations. That position is the Title VI Officer.

The Title VI Officer for MDSHA is assigned to the OEO and has the lead responsibility for monitoring the Federal-aid Program in the following program areas: (1) *Planning*, (2) *Project Development Process*, (3) *Right-of-Way*, (4) *Construction*, and (5) *Research*.

## CONTRACTOR COMPLIANCE

The purpose of Contractor Compliance is to monitor the employment related activities of all MDSHA prime construction contractors and sub-contractors by ensuring non-discrimination in contract compliance activities and EEO for the contractor's workforce.

MDSHA is committed to maintain an active Contractor Compliance Program to ensure non-discrimination of the contractor's employment practices as required by federal regulation. This requirement is based on the regulations and statutes such as Executive Order 11246 and Executive Order 11375 as set forth in the Required Contract Provisions and in accordance with 23 CFR 230. This commitment extends to the workforce of all MDSHA construction contractors. The MDSHA will work with all contractors in carrying out equal employment opportunity obligations in the review of his/her activities in accordance with the contract documents.

The Contractor Compliance Program maintains the commitment to ensuring highway construction firms are adhering to their EEO contractual obligations, ensuring that all activities and operations are conducted in a non-discriminatory fashion and ensuring equal opportunities for minorities and females.

The Contractor Compliance Program Responsibilities include:

- Develop/implement and disseminate the OEO's Contractor Compliance Plan.
- Schedule and conduct educational and informational EEO workshops.
- Schedule and conduct compliance reviews and desk audits for construction projects.
- Review and approve the contractors' Affirmative Action Statement.

Review and approve the contractors' Good Faith Efforts with regard to ensuring equal employment opportunity in their employment practices to include hiring, recruitment, promotion, termination and education.

## LIMITED ENGLISH PROFICIENCY

Federal and recent state laws require that state agencies provide open access to various programs and services to the public, including those with LEP. To comply and provide our customers with equal access to critical transportation-related information in useable formats and environments, MDSHA has developed resources and implementation plans to provide services to our LEP customers.



MDSHA directs all offices who offer assistance to the public to take reasonable steps to provide LEP individuals with meaningful access to their programs, activities, and services. The Employment and Program Equity Division within the OEO is responsible for providing MDSHA employees and divisions with technical assistance. This includes advising divisions of LEP requirements and its implementation, and assistance in developing individual division plans and mechanisms.

Individuals who do not speak English as their primary language, and who have a limited ability to read, speak, write, or understand English can be LEP. These individuals may be entitled to language assistance with respect to a particular type of service, benefit, or encounter. Federal laws particularly applicable to language access include Title VI of the Civil Rights Act of 1964, which prohibits discrimination based on national origin, Executive Order 13166 issued in 2000, and Maryland Senate Bill 265, enacted in 2002.

Executive Order 13166 requires Federal agencies, and those agencies receiving federal funds, to examine the services they provide, identify any need for services to those with LEP, and develop and implement a system to provide those services so LEP persons can have meaningful access to them. It is expected that agency plans will provide for such meaningful access consistent with, and without unduly burdening the fundamental mission of the agency. The Executive Order also requires that the Federal agencies work to ensure that recipients of Federal financial assistance, such as MDSHA, provide meaningful access to their LEP applicants and beneficiaries.

MD Senate Bill 265 is primarily a state reaffirmation of Executive Order 13166. The law declares the intent of the Maryland General Assembly that State departments, agencies, and programs shall provide equal access to public services for individuals with LEP; requiring vital documents to be translated into any language spoken by any LEP population that constitutes 3% of the overall population within a specified geographic area.

## ON THE JOB TRAINING

MDSHA's On-the-Job Training program provides OJT opportunities aimed at developing full journeyman status for minorities, females, disadvantaged and disabled individuals in the highway construction industry, to enhance skills in individuals for a particular craft, and to maintain or exceed the proposed workforce representation goals for the contractor as established in the contract; thus meeting the primary objective of equal employment opportunity. This effort is in accordance with the contractor's affirmative action initiatives as described in the contract documents and to promote equal opportunity in the highway construction industry.

It is the policy of MDSHA to require full utilization of all available training and skill-improvement opportunities to assure the increased participation of minority groups and disadvantaged persons and females in all phases of the highway construction industry. The OJT Program is one vehicle for implementing this policy.

## AMERICANS WITH DISABILITIES ACT TITLE II

MDSHA is committed to a policy of full accessibility and inclusiveness in its business activities. We are committed to upholding the intent and spirit of the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, which prohibit discrimination on the basis of disability in admission to, access to, or operations of MDSHA's programs, services or activities, to the fullest extent possible.

It is MDSHA's responsibility and desire that no person be excluded from participation in, be denied the



benefits of, or be subjected to discrimination under any program or activity supported by MDSHA based on their disability. To the end, each and every employee is responsible for working cooperatively to achieve this. MDSHA is fully committed to the goal of achieving equal opportunity and nondiscrimination for all persons in their interactions with MDSHA.

#### DISADVANTAGED / MINORITY BUSINESS ENTERPRISE PROGRAM

MDSHA is committed to the intent and philosophy of the D/MBE Program. It is MDSHA's objective to monitor the participation and representation of contractors involved in the program to ensure that they are in compliance with the requirements of the program as addressed in the Code of Federal Regulations 49 CFR 26.37 (b) (c) and in accordance with the MDOT D/MBE Program Guidelines

MDSHA's objective is to provide supportive services to D/MBEs conducting business with or seeking to conduct business with MDSHA. Supportive services are those activities and services that are designed to contribute to the growth and eventual self-sufficiency of D/MBEs so that they may achieve proficiency in competing for contracts and subcontracts. The State of Maryland's D/MBE goal program strives to reach a minimum of 25% minority participation on all contracts; with sub-goals of 10% for Women owned firms and 7% for African American owned firms. One of the primary objectives of the D/MBE Supportive Services Program is to increase the number of certified D/MBEs participating in the highway program and to contribute to the growth and eventual self-sufficiency of D/MBE firms.

Another component of the D/MBE Program is monitoring contractors and consultants, both prime and D/MBE firms, for compliance with state and federal regulations. In doing so, OEO has established the D/MBE Compliance Review Process as a necessary step to ensure the integrity of the program is accomplished. MDSHA's OEO oversees the compliance process with assistance from the District EEO Officers, Program Managers and field personnel who are also charged with the responsibility of monitoring the D/MBE program. It is their responsibility to verify that the contracting and consulting firms are in accordance with the above regulations, programs, and guidelines. Compliance is monitored on all contracts administered by MDSHA, including construction, maintenance, consultant services, information technology, and architectural and engineering.

## 17.0 CLOSEOUT PLAN

### SUMMARY

As a multi-phase project, the I-81 Improvements Project will utilize separate contract closeout procedures for each phase. The Project Closeout Plan used for each Phase will follow existing MDSHA procedures for Partial Acceptance for Maintenance.

### PROJECT CLOSEOUT PLAN

#### Acceptance for Maintenance

In preparation for Acceptance for Maintenance the MDSHA Project Engineer will perform a walk through and prepare a punch list of items that require correction prior to requesting a Final Inspection. Once the request is submitted for a Final inspection by the contractor, the Area Engineer will schedule the Final Inspection with the following individuals in attendance:

- MDSHA Project Manager
- FHWA Area Engineer
- District 6 ADE Construction
- District 6 ADE Maintenance
- District 6 ADE Traffic
- WVDOH Construction Engineer (as applicable to Phase I)
- Project Manager
- Regional Construction Engineer
- MDSHA Resident Maintenance Engineer - Hagerstown Shop
- Contractor's Project Manager
- Washington County Division of Public Works, Highway Department
- Maryland Department of Environment
- Local Fire & Rescue Services

Individuals in attendance will review the project site and develop a final punch list of construction items and review the QC documentation at a minimum before Acceptance for Maintenance will be considered. Key items to be discussed at the meeting will include the turnover of the project from the Contractor to the MDSHA for Maintenance of the completed highway system. Additional items to be discussed are the maintenance requirements, limits of maintenance and responsibilities of each Government agency since multiple agencies will be affected by one of the construction projects. Discussion will also be centered on emergency services and the access issues affecting a timely response to emergencies for each individual project and throughout the corridor.

As a condition of acceptance for maintenance, the Contractor will be required to provide the documents identified in the general provisions of the contract documents including as-built drawings for permanent stormwater management facilities.

Additionally, for any work performed in West Virginia, all work will be required to meet WVDOH acceptance for maintenance requirements. The evaluation of such requirements will be included in the above mentioned process.



## Final Completion

Final Completion will follow the requirements as established in the contract documents whereas the Contractor will request Final Inspection and the District Construction Office will make a final review of construction items, QC documentation and other documentation to assure that the project has been completed in close conformity to the plans and specifications. As a condition of Final Completion the Contractor shall provide the items as stipulated in the general provisions. The Contractor shall be required to provide all warranties, maintenance agreements, certifications, operating manuals, as-built plans to assist the MDSHA in future maintenance and operation of the completed facility.

Final Acceptance and Final Payment will follow the requirements as stipulated in the general provisions whereas the District Construction Office as well as the Landscape Operations Division will be required to perform necessary inspections and surveys and submit to the Contractor after the Care and Replacement Period a list of deficiencies that require correction prior to Final Completion. Upon completion of the deficiencies list the District Construction Office will initiate an audit of all pay quantities. Upon completion of the audit and acceptance of all materials used by the Office of Materials and Technology, the District Construction Office will initiate the processing of the Memorandum of Action thus authorizing Final Payment within 30 days of the issuance of the Memorandum of Action.

Additionally, for any work performed in West Virginia, all work will be required to meet WVDOH Final Completion requirements. The evaluation of such requirements will be included in the above mentioned process.

## LESSONS LEARNED

As part of the Maryland Quality Initial (MDQI) partnering process, a close-out meeting will be held toward the end of each contract. This is an opportunity to bring together all of the stakeholders and discuss lessons learned.

The close-out meeting should celebrate successes and identify opportunities for improvement. At the close-out meeting, the participants should discuss whether they had effective communication during the project. Did all stakeholders have the opportunity to express their view points and understand others?

The team should also review the final results from the partnering rating forms, effectiveness of the issue resolution process, and whether the team met its goals and objectives. The participants should strive to answer several basic questions:

- What made this a great project/contract?
- What would you keep the same if you were starting the project/contract over?
- What would you do differently next time?"

Sharing the outcome from the participant's self-analysis at the close-out meeting is a way to gain a better understanding of some of the best practices used as well as sharing opportunities for improvement. Each team member can take this knowledge to the next contract thereby striving to continuously improve the I-81 Improvements Project.



## 18.0 PROJECT DOCUMENTATION

### OVERVIEW

The District Construction Office (DCO) is tasked with the overall contract administration. As the administrator of the contract, the DCO and its representatives will be the clearinghouse for disseminating direction to the Contractor. The DCO maintains original Project files consisting of a series of records files. These files contain the original Invitation for Bids, all addenda issued prior to bidding and copy of the successful contractors bid prices. All original correspondence including MDSHA, FHWA and Contractor's documents are included as well as copies of environmental permits, Notice of Award and Notice to Proceed letters issued by the Office of Construction (OOC).

The Project Field Office (PFO) also compiles original records such as inspector's daily reports, daily logs, maintenance of traffic reports, erosion and sediment control reports and material clearance documentation that are generated in the field. The PFO is also responsible for generating progress payments to the Contractor. These records constitute the verification that all work has been completed in conformance to the plans and specifications. The Contractor's certified payrolls, payroll compliance forms and MBE compliance forms are also compiled in the field as verification that all of the contract requirements are met.

### DOCUMENT CONTROL PLAN

Both the DCO and the PFO maintain original Project files consisting of all of the records and correspondence generated during the construction of the project. All correspondence including MDSHA, FHWA and the Contractor documents are included.

All correspondence generated by the DCO in conjunction with the Project will be carbon copied to the PFO to keep them informed of any direction given to the contractor.

All documents are available either by hard copy by the DCO. Researchers, auditors, and others in need of Project Documentation request information by listing the documentation requested. The DCO will respond to these requests by making copies of the requested documents. This process varies slightly for specialized documents such as drawings, reports, and certain submittal information as the District Office may not have the reproduction capabilities necessary. Assistance from the Design offices may be required, however, the DCO will be responsible for distribution of all documents once they have been compiled.

All progress payments to the Contractor are generated at the PFO. Once change orders issued by the DCO are approved by OOC, a copy will be transmitted to the PFO so that it may be included on the next progress payment to the contractor.

### TRANSFER OF DOCUMENTS UPON COMPLETION OF THE PROJECT

Upon completion of the project, all records generated by the PFO will be assembled and delivered to the Contract Finals Team at the District Office. The Contract Finals Team will thoroughly review the Sketchbook prepared in the field and audit the payment of each item in the contract. IDRs and sketches documenting pay quantities are reviewed for each Sketchbook entry to ensure that all paid quantities match the as-built quantities. Once the project is closed, all documents generated at the DCO and the PFO are compiled for storage for the mandatory retention period.



## DOCUMENT CONTROL PROCEDURES MANUAL

A Document Control Procedures Manual may be developed for the I-81 Improvement Project at a later date if future contracts are let using alternate delivery methods outside of the traditional Design-Bid-Build process. All projects that are currently to be let will be done utilizing the traditional design-bid-build concept.

## 19.0 ENVIRONMENTAL MONITORING

### GENERAL

A FONSI (Finding of No Significant Impact) was issued for the project due to minimal impacts to resources. The Record of Decision for the FONSI describes how the selected alternative was chosen to minimize impacts to environmental resources and how a comprehensive mitigation and environmental stewardship package will be implemented to mitigate for unavoidable impacts during development of the final project.

Environmental oversight will be provided by MDSHA using standard methods and procedures applicable to all MDSHA projects.

### ENVIRONMENTAL RESPONSIBILITIES

On each Phase of the Project, the MDSHA will be responsible for ensuring that the design and construction meets the environmental commitments, including:

- Monitoring compliance for all Design and construction environmental mitigation activities specified by the FONSI, ROD and subsequent agreements with Stakeholders
- Reviewing final design plans to monitor that permit conditions are met
- Monitoring construction to assure that permit conditions are met
- Informing the contractor, permittee's and/or other involved agencies concurrently of any problems regarding non-compliance permit conditions
- Monitoring construction to verify that the work is in compliance with Project authorizations
- Recommending measures to bring the Project into compliance with permit conditions.
- Attending construction partnering sessions to assess anticipated construction schedules and activities.

### ENVIRONMENTAL COMPLIANCE

The MDSHA Office of Environmental Design's (OED) will ensure that environmental design, compliance, and stewardship is a fundamental and integral component of the highway planning, design, construction and maintenance for the I-81 Improvements Project. Within OED, the Environmental Programs Division will provide the following specific services to ensure environmental compliance:

- Work closely with the planners, designers, and engineers to achieve an environmentally sensitive Project by avoiding and/or minimizing impacts to sensitive natural resources.
- Process, negotiates, and track wetland and waterway permit applications/permits with Federal and State resources agencies, to ensure permit compliance through the planning, design, construction, and maintenance phases of the Project.
- Prepare plans, specifications, and estimates for any mitigation projects.
- Wetland delineation and functional assessment services, water quality monitoring, wetland mitigation and stream restoration monitoring, and environmental monitoring of construction projects.



- Administer a Quality Assurance Program to inspect the Project for compliance with the approved Erosion and Sediment Control Plans, utilizing a checklist and rating system.

### ADAPTIVE MANAGEMENT

Adaptive Management is a key strategy that will be used by the Project Team for the I-81 Project. Adaptive Management is an iterative process for resource protection that examines existing conditions and monitors the effectiveness of protection measures that are employed. As a result of evaluation of the effectiveness of existing measures, modifications to programs or actions are made to enhance the overall protection of the various resources. Adaptive management incorporates ongoing efforts throughout, and in some cases beyond, the active phase of the project.

Strategies for using the adaptive management concept include:

- Training of MDSHA, Consultant, and Contractor staff.
- Performance measures.
- Monitoring activities.
- Meeting project goals for water quality, erosion and sediment control, wildlife protection, air quality, noise and cultural resource protection.

## 20. APPENDICES

### MOU WITH WEST VIRGINIA



**MEMORDANUM OF UNDERSTANDING  
WITH  
WEST VIRGINIA**

## MEMORANDUM OF UNDERSTANDING

I- 81 Bridges Over the Potomac River and Adjacent Roadways Widening  
by and between

**THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION-DIVISION OF  
HIGHWAYS  
and**

**THE STATE HIGHWAY ADMINISTRATION OF THE MARYLAND DEPARTMENT OF  
TRANSPORTATION**

**THIS MEMORANDUM OF UNDERSTANDING ("MOU")**, executed in duplicate, made and entered into this 6<sup>th</sup> day MAY, 2016, by and between the State Highway Administration of the Maryland Department of Transportation, acting for and on behalf of the State of Maryland, hereinafter called "**MDSHA**," and the West Virginia Department of Transportation, Division of Highways, acting for and on behalf of the State of West Virginia, hereinafter called "**WVDOH**." When used collectively, **MDSHA** and **WVDOH** will be referred to as the "**PARTIES**".

**WHEREAS**, I-81 (Maryland Veterans Memorial Highway) is part of the National System of Interstate and Defense Highways and serves as a major trade and commerce highway route between the areas of western Maryland and the Eastern Panhandle of West Virginia; and

**WHEREAS**, there are two parallel bridge spans for MDSHA Bridge No. 21078 that cross the Potomac River and a portion of the C&O Canal Historic Park; on each span traffic is running in the opposite direction from the other, and the two parallel bridge spans are jointly owned by MDSHA and WVDOH (Log Mile Reference 0.000 – 0.230), with MDSHA being the lead agency for the maintenance, repair and reconstruction of both of the bridge spans, collectively called the "**BRIDGES**"; and

**WHEREAS**, as determined by the actual State boundary line ("**BOUNDARY LINE**") established by and agreed to by the PARTIES, MDSHA is responsible for seventy three and three tenths percent (73.3%) ("**MDSHA BRIDGES OBLIGATION**") and WVDOH is responsible for twenty six and seven tenths percent (26.7%) ("**WVDOH BRIDGES OBLIGATION**") of the BRIDGES as regards maintenance, repair and reconstruction costs as outlined in an Agreement executed on July 20, 1960 ("**AGREEMENT**") ("**EXHIBIT Number 1**") and Supplemental Agreement executed on November 26, 1963 ("**SUPPLEMENT**") ("**EXHIBIT Number 2**") between the PARTIES. The AGREEMENT and the SUPPLEMENT are attached hereto and incorporated herein as **EXHIBIT Number 1** and **EXHIBIT Number 2** respectively; and

**WHEREAS**, the PARTIES now desire to widen the BRIDGES and to widen the roadways that approach the BRIDGES in each direction by the addition of a third lane in each direction of I-81: from the southern end of the BRIDGES to a point north of US 11 (Westport Pike) in WV ("**WVDOH ROADWAY**") and from the northern end of the BRIDGES to a point north of the MD 63 (Potomac Street)/MD 68 (Conococheaque Street) interchange in Maryland ("**MDSHA**



**ROADWAY")** under State Highway Administration Contract No.WA3445272, hereinafter collectively called the **"PROJECT"**; and

**WHEREAS**, with the execution of this MOU the LOC entered between the PARTIES, dated January 17, 2014 is null and void; and

**WHEREAS**, WVDOH shall be responsible for one hundred percent (100%) of all design and construction costs to widen the WVDOH ROADWAY and MDSHA shall be responsible for one hundred percent (100%) of all design and construction costs to widen the MDSHA ROADWAY; and

**WHEREAS**, the cost to design the WVDOH's portion of the PROJECT, which includes the WVDOH BRIDGES OBLIGATION and the WVDOH ROADWAY is currently estimated to be One Million Dollars (\$1,000,000) and the construction costs to construct the WVDOH portion of the PROJECT, including the same areas, is currently estimated to be Thirty Eight Million Dollars (\$38,000,000); and

**WHEREAS**, the cost to design the MDSHA's portion of the PROJECT, which includes the MDSHA BRIDGES OBLIGATION and the MDSHA ROADWAY is currently estimated to be Three Million Dollars (\$3,000,000) and the construction costs to construct the WVDOH portion of the PROJECT, including the same areas, is currently estimated to be Fifty Million Dollars (\$50,000,000); and

**WHEREAS**, the above referenced design and construction costs are only estimates, and WVDOH agrees to pay all of the actual design and construction costs including MDSHA's direct salaries, payroll burden, overhead, consultant and construction engineering services costs as outlined in this MOU for the WVDOH portion of the PROJECT; and

**WHEREAS**, MDSHA has agreed to design and construct the PROJECT; and

**WHEREAS**, the PARTIES agree that all costs incurred for WVDOH's portion of the PROJECT as stated herein shall be paid in full by WVDOH and shall be incurred at WVDOH's sole cost; and

**WHEREAS**, MDSHA and WVDOH agree that this MOU will benefit both PARTIES hereto and will promote the safety, health and general welfare of the citizens of both States.

**NOW, THEREFORE, THIS MOU WITNESSETH**, that for and in consideration of the mutual promises and other good and valuable considerations contained herein, the receipt and adequacy whereof is hereby acknowledged, be it understood that MDSHA and WVDOH do hereby agree as follows:

## **I. PROJECT DESCRIPTION**

- A. The PROJECT shall consist of the widening of the I-81 BRIDGES over the Potomac River and over a portion of the C&O Canal Historic Park, including additional roadway widening and other improvements along I-81 that joins I-81 to the BRIDGES in Maryland and in West Virginia.

1. BRIDGES

- a. One additional lane and one shoulder will be added to each of the two BRIDGE spans in both the northbound and southbound directions over the Potomac River and over a portion of the C&O Canal Historic Park.
- b. By agreement between the PARTIES regarding the cost obligations for the PROJECT, pursuant to the BOUNDARY LINE, MDSHA shall be responsible for seventy three and three tenths percent (73.3%) of the maintenance, repair, reconstruction and widening of the BRIDGES (**"MDSHA BRIDGES OBLIGATION"**) and WVDOH shall be responsible for twenty six and seven tenths percent (26.7%) of the maintenance, repair, reconstruction and widening of the BRIDGES (**"WVDOH BRIDGES OBLIGATION"**) as regards design, maintenance, and reconstruction costs.

2. ROADWAY WIDENING AND OTHER IMPROVEMENTS IN MARYLAND

- a. I-81 from the northern end of the BRIDGES to a point north of the MD 63/MD 68 interchange in Maryland will also be widened so as to add a third lane in each direction (**"MDSHA ROADWAY"**).
- b. The widening of the BRIDGES that is MDSHA BRIDGES OBLIGATION, together with the roadway widening associated with the MDSHA ROADWAY is collectively called the **"MDSHA PORTION"**.

3. ROADWAY WIDENING AND OTHER IMPROVEMENTS IN WEST VIRGINIA

- a. I-81 from the southern end of the BRIDGES to a point north of the US 11 interchange in West Virginia will also be widened so as to add a third lane in each direction (**"WVDOH ROADWAY"**).
- b. The widening of the BRIDGES that is WVDOH BRIDGES OBLIGATION, together with the roadway widening associated with the WVDOH ROADWAY is collectively called the **"WVDOH PORTION"**.

II. PROJECT DESIGN PHASE

A. MDSHA Responsibilities

- 1. MDSHA shall accomplish all tasks necessary to design the PROJECT.



2. Transmittals shall be defined as all necessary reproducible construction drawings, special provisions (referencing all relevant codes, regulations and requirements) estimates, lists of materials and all pertinent items requested for the PROJECT, or any revisions thereto, hereinafter referred to as "TRANSMITTALS".
3. MDSHA or its consultants shall incorporate the WVDOH PORTION of the PROJECT and all pertinent items necessary for the WVDOH PORTION of the PROJECT into the PROJECT plans.
4. MDSHA shall provide WVDOH with four (4) sets of the PROJECT plans at each phase of the design process, and/or as required by the previous permit review correspondence for its review and comment, and MDSHA shall retain sole authority for approvals. The design phase shall consist of (i) preliminary design at thirty percent (30%) completion, (ii) semifinal design at sixty-five percent (65%) completion, (iii) final design review at ninety-five percent (95%) completion, and (iv) Plans, Specifications, and Estimates (PS&E) at one hundred percent (100%) completion.
5. In the event that MDSHA desires to revise the PROJECT plans subsequent to final plan approval, but prior to initiation of construction activities, and said revision(s) affect the BRIDGES and/or the WVDOH ROADWAY, MDSHA shall provide WVDOH with written notification of said revision(s), including estimated costs.

B. WVDOH Responsibilities

1. WVDOH or its consultant shall prepare and furnish all necessary WVDOH TRANSMITTALS requested by MDSHA for the WVDOH PORTION of the PROJECT.
2. WVDOH shall provide MDSHA with written review comments on all PROJECT plans, data or materials provided by MDSHA for review within fifteen (15) working days following the WVDOH receipt of the items sent for review.
3. Within fifteen (15) working days of the request by MDSHA for review, WVDOH shall provide MDSHA with any and all requested information and data that WVDOH may have that will assist MDSHA in the design of the PROJECT.
4. In the event WVDOH desires to revise the plans for the BRIDGES and/or WVDOH ROADWAY subsequent to final plan approval, but prior to initiation of construction activities, WVDOH shall provide MDSHA with written notification of the proposed revision(s). Any costs for the proposed revision(s) submitted by WVDOH shall be paid for solely by WVDOH. WVDOH shall promptly increase or decrease its funding appropriations for such revisions, if and as necessary, in accordance with this MOU.

### III. DESIGN PHASE FUNDING

#### A. MDSHA Responsibilities

1. MDSHA shall be responsible for all costs to design the MDSHA PORTION of the PROJECT, which are: (i) one hundred percent (100%) of the design costs for the MDSHA ROADWAY, (ii) seventy three and three tenths percent (73.3%) of the design cost for the I-81 BRIDGES, and of the costs to lease the land along the south side of the Potomac River in West Virginia on land that is owned by Allegheny Energy Supply Co. ("AESC") and which will be used as an access route and a staging area primarily to support the construction of the BRIDGES ("AESC LANDS").
2. MDSHA shall provide a detailed invoice to WVDOH on a periodic basis for all costs incurred by MDSHA for all design activities related to the WVDOH PORTION of the PROJECT, including, but not limited to, MDSHA's construction engineering services, direct salaries and payroll burden and other direct costs for consultant services, reproduction, and document preparation, and indirect costs to include, but not limited to MDSHA's overhead and direct costs. The invoice shall be accompanied by sufficient documentation to evidence all actual costs incurred.

#### B. WVDOH Responsibilities

1. WVDOH will reimburse MDSHA, its agents, consultants, etc. for one hundred percent (100%) of the design costs (plus applicable MDSHA salaries, payroll burdens and overhead) for the WVDOH PORTION of the PROJECT, including twenty six and seven tenths percent (26.7%) of the design costs to construct the BRIDGES and of the costs for the staging area in West Virginia from January 17, 2014 until the WVDOH accepts the WVDOH PORTION of the PROJECT for maintenance.
2. WVDOH is responsible for all costs associated with the design of the WVDOH PORTION of the PROJECT.
3. The total amount to be reimbursed to MDSHA by WVDOH for the design of the WVDOH PORTION of the PROJECT under this MOU is currently estimated to be One Million Dollars (\$1,000,000). The final cost, which could be higher or lower, will be determined by the sum of the final design costs, consultant services, construction activities and items based on bid prices, conditions encountered during construction, MDSHA's direct salaries, payroll burden and overhead incurred during the design and construction of the WVDOH PORTION of the PROJECT. WVDOH agrees that it shall pay all such costs.
4. WVDOH shall reimburse MDSHA within thirty (30) days of its receipt of an invoice for payment for all undisputed items in each invoice for actual costs incurred by MDSHA, or its agents, for the design of the WVDOH PORTION of the PROJECT. (For any disputed invoice see Section VII. E.)



5. If WVDOH does not make timely payments of undisputed documented design related invoices submitted by MDSHA to WVDOH as provided herein, MDSHA shall, at its sole discretion and after providing thirty (30) days prior written notice to WVDOH of WVDOH's unpaid invoices, send all delinquent invoices for collection to MDSHA's Central Collection Unit ("CCU") which is located at:

Maryland Department of Management and Budget  
300 West Preston Street, First Floor  
Baltimore, MD 21201

Phone: 410-767-1220 or 1-888-248-0345

Email: [ask.ccu@maryland.gov](mailto:ask.ccu@maryland.gov)

6. WVDOH hereby agrees that it shall reimburse MDSHA for one hundred percent (100%) of all utility relocation design costs associated with the construction of the WVDOH PORTION of the PROJECT.
7. At WVDOH's sole cost, WVDOH shall review the PROJECT design plans and related materials provided for that purpose and shall provide written comments to MDSHA within fifteen (15) working days following receipt thereof.
8. In the event WVDOH desires to revise the WVDOH PORTION of the PROJECT's design plans subsequent to final plan approval, but prior to initiation of construction activities, WVDOH shall provide MDSHA with a written request of said revision including estimated costs, for MDSHA to incorporate into the plans for the PROJECT.

#### **IV. RIGHT-OF-WAY PHASE**

##### **A. MDSHA Responsibilities**

1. In accordance with MDSHA's standard procedures and all applicable Federal and State laws regarding same, and as part of the PROJECT requirements, MDSHA shall accomplish all tasks necessary to acquire, at MDSHA's expense, the property interests required for the MDSHA PORTION of the PROJECT including, but not limited to all easements (e.g. construction, drainage, etc.), rights-of-entry and fee simple property acquisitions, such tasks to include, but not be limited to, title examinations and reports, appraisals, appraisal reviews, plat preparation, negotiation services, possible condemnation proceedings and settlements.

##### **B. WVDOH Responsibilities**

1. In accordance with WVDOH standard procedures and all applicable Federal and State laws regarding same, and as part of the PROJECT requirements, WVDOH shall accomplish all tasks necessary to acquire, at WVDOH's expense and in WVDOH's name, all the property interests required for the construction of the WVDOH PORTION of the PROJECT, including, but not

limited to all easements (e.g., construction, drainage, etc.), rights-of-entry and fee simple property acquisitions, such tasks to include, but not be limited to, title examinations and reports, appraisals, appraisal reviews, plat preparation, negotiation services, possible condemnation proceedings and settlements.

2. By execution of this MOU, WVDOH hereby grants a right-of-entry onto all WVDOH owned property or other WVDOH property interests needed along and adjacent to I-81 to MD, its agents, successors, consultants, assigns, contractors, sub-contractors, and employees for the purposes involved with the design and/or construction of PROJECT, with such right-of-entry to terminate upon completion and acceptance of the PROJECT by MDSHA and WVDOH, or at such other period that is mutually agreed upon by the PARTIES.
3. WVDOH will acquire all of the required rights-of-way needed by contract plans to construct the WVDOH PORTION of the PROJECT and WVDOH shall acquire any and all permits that are required by the plans, or MDSHA's agents, required to design and construct the WVDOH PORTION of the PROJECT at WVDOH's sole expense.
4. WVDOH will lease the land area specified by MDSHA along the south side of the Potomac River on land that is owned by AESC that is to be used as an access route and a staging area primarily to support the construction of the BRIDGES ("AESC LANDS").
5. WVDOH, by execution of this MOU, provides a right of entry to MDSHA and its contractors, consultants, and assigns onto WVDOH owned lands, rights-of-way, and other property for use as a temporary easement or staging area or to construct the PROJECT as specified by MDSHA and agreed upon by WVDOH.

## **V. RIGHT-OF-WAY PHASE FUNDING**

### **A. MDSHA Responsibilities**

1. In the event additional property interests (e.g., right-of-entry, easements, fee simple) are needed for the construction of the PROJECT, MDSHA shall cover the costs only for the tasks necessary to acquire such property interests for the MDSHA PORTION of the PROJECT.
2. MDSHA shall not fund any costs related to the acquisition of property interest in West Virginia for the WVDOH PORTION of the PROJECT, with the exception that MDSHA will reimburse WVDOH for Seventy Three and Three Tenths Percent (73.3%) of the cost to lease the AESC LANDS.

### **B. WVDOH Responsibilities**



1. WVDOH shall be responsible for all costs incurred by WVDOH in granting a right-of-entry to MDSHA, its agents, successors, assigns, contractors, sub-contractors, and employees for the purpose of constructing the PROJECT.
  - a. The only exception to this pertains to the acquisition of the staging area in West Virginia, along the south side of the Potomac River on AESC LANDS that is to be used as a staging area primarily to support the construction of the BRIDGES. To lease the AESC LANDS, MDSHA will pay for 73.3% percent of the costs to rent the staging area and WVDOH will pay 26.7% percent of the cost to rent the staging area from AESC. WVDOH will take the lead in leasing the property from AESC for the AESC LANDS.
  - b. The cost to lease the AESC LANDS for a three (3) year period is Fifteen Thousand Dollars (\$15,000). WVDOH and MDSHA will be responsible for its respective share of the lease cost that corresponds to WVDOH's and MDSHA's BRIDGES OBLIGATION. In the event that the lease time requires an extension and/or additional cost is required to maintain the lease due to a time extension, the PARTIES shall mutually agree as the parameters.
2. WVDOH shall not fund any property interest in MDSHA for the MDSHA PORTION of the PROJECT.

## **VI. CONSTRUCTION PHASE**

### **A. MDSHA Responsibilities**

1. MDSHA shall advertise the PROJECT for construction bids, administer the construction contract, construct the PROJECT as shown on the final PROJECT plans and provide construction engineering services for the PROJECT.
2. Contractors hired by MDSHA will have comply with WVDOH's specification on WVDOH roadways and WVDOH's insurance requirements such as naming WVDOH as an additional insured and indemnify and hold harmless WVDOH.
3. MDSHA shall obtain all permits necessary to construct the MDSHA PORTION of the PROJECT.
4. MDSHA shall be the principal construction manager for the PROJECT with responsibility for total PROJECT oversight and for conducting all monthly progress meetings. MDSHA shall notify WVDOH in writing of all progress meetings for WVDOH PORTION of the PROJECT ten (10) business days prior to the meeting date. At WVDOH's cost, a WVDOH representative

may attend all such meetings so that WVDOH may be cognizant of the PROJECT's progress, any anticipated changes, and possible cost overruns.

5. At WVDOH's sole cost, WVDOH may provide inspectors for the construction of the WVDOH PORTION of the PROJECT. WVDOH inspectors shall conduct inspections in accordance with the construction and work schedule of MDSHA's PROJECT Manager or designee, assigned to manage the construction of the PROJECT. Any significant defect or irregularity attributable to MDSHA's contractor (other than those which can be corrected on the site following notification from MDSHA's PROJECT Engineer) shall be corrected by MDSHA's contractor after MDSHA has received written notification from WVDOH of such defect or irregularity; notification must occur prior to the release of funds to the contractor for work performed on the PROJECT.
6. In the event that revisions to the PROJECT are required due to conditions encountered during construction, said revisions may be made promptly by MDSHA for MDSHA ROADWAY without prior concurrence by WVDOH, and said revisions may be made promptly by WVDOH for WVDOH ROADWAY without prior concurrence by MDSHA, and any revision to the BRIDGES must be agreed to by both Parties in order to minimize or eliminate possible delay claims by MDSHA's construction contractor. MDSHA shall promptly provide WVDOH with a written description of all revisions and WVDOH shall be responsible for all undisputed costs attributed in any way to the WVDOH PORTION of the PROJECT.
7. In the event utility relocations are required to construct the PROJECT, MDSHA shall oversee and facilitate all utility relocations for the construction of the MDSHA portion of PROJECT to be performed by the utility company with the cost responsibilities being determined by Maryland Utility Prior Rights laws.
8. Following completion of the PROJECT, MDSHA shall make a final accounting of actual design and construction costs incurred by MDSHA that are attributable to the WVDOH PORTION of the PROJECT.
9. MDSHA shall be responsible for providing a schedule for all road and/or lane closures that will be necessary during construction to complete the PROJECT and for completing the maintenance of traffic plan which will ultimately be used during construction of the PROJECT. Further, MDSHA shall work with WVDOH to complete all requirements relating to the closure of the roads and/or travel lanes, including, without limitation, all advertising or notification requirements.



10. Upon completion of the construction of the PROJECT, MDSHA and WVDOH will jointly perform a final inspection of all work related to the WVDOH PORTION of the PROJECT. If defects or deficiencies are noted, WVDOH shall provide written notice of the defects and deficiencies to MDSHA no later than ten (10) working days after such final inspection and include a "punch list" of the defects and deficiencies requiring correction. MDSHA shall require MDSHA's contractor to correct said defects and deficiencies and MDSHA and WVDOH shall again jointly inspect those items listed on the "punch list" developed by WVDOH. Upon the satisfactory completion of the work related to WVDOH PORTION of the PROJECT and within fifteen (15) working days of final inspection of the corrected "punch list" items, WVDOH shall provide written notice to inform MDSHA that the work related to WVDOH PORTION of the PROJECT is satisfactory, and WVDOH shall accept the WVDOH PORTION of the PROJECT for ownership and maintenance. MDSHA will provide WVDOH with a final invoice at that time, which shall be prior to MDSHA releasing any retained funds for the completion of the PROJECT to MDSHA's contractor.
11. Commencing on the date that MDSHA executes the final plan approval of the PROJECT's design plans and continuing until the date that the WVDOH PORTION of the PROJECT has been constructed and found acceptable to WVDOH and to MDSHA, MDSHA agrees to provide WVDOH with quarterly progress reports and quarterly cost reports. The progress reports shall include progress curves and percentage completion calculations for WVDOH PORTION of the PROJECT based upon the PROJECT Schedule. The quarterly cost reports shall document all work performed in connection with the WVDOH PORTION of the PROJECT, identify costs paid in connection with the WVDOH PORTION of the PROJECT, and forecast the total costs necessary to complete the WVDOH PORTION of the PROJECT after considering all approved and pending changes to the design plan and remaining contingencies.
12. Within ninety (90) days after completion and acceptance of the WVDOH PORTION of the PROJECT, MDSHA shall provide WVDOH with two (2) sets of As Built drawings, at WVDOH's expense, showing field changes for the WVDOH PORTION of the PROJECT.

B. WVDOH Responsibilities

1. WVDOH shall obtain all permits for MDSHA that are necessary for MDSHA to construct the WVDOH PORTION of the PROJECT.

2. In the event WVDOH desires to make revisions to the BRIDGES and/or the WVDOH ROADWAY portion of the PROJECT subsequent to final plan approval and/or during construction, it shall promptly submit a request in writing to MDSHA, including the requested revisions and the estimated costs. WVDOH agrees that any additional costs incurred by, or charged to MDSHA to implement WVDOH requested revisions for the WVDOH portion of the PROJECT shall be the sole responsibility of WVDOH.
3. WVDOH, at its option and expense, may provide an inspector during construction of the PROJECT. If WVDOH elects to exercise this option, MDSHA's PROJECT inspectors shall consult with the WVDOH inspector prior to finalizing construction decisions which affect WVDOH PORTION of the PROJECT (i.e. the BRIDGES and the WVDOH ROADWAY), whenever such consultation is appropriate and does not create a delay claim situation or *is not an emergency*. MDSHA's PROJECT inspectors shall have final authority during construction for the MDSHA ROADWAY and WVDOH's PROJECT inspectors shall have final authority during construction for the WVDOH ROADWAY; however, the inspectors of both Parties must agree prior to finalizing construction decisions which affect the BRIDGES.
4. WVDOH shall, in the event of deficiencies for the WVDOH PORTION of the PROJECT observed during the joint MDSHA and WVDOH final inspection for the WVDOH PORTION of the PROJECT, notify MDSHA in writing no more than ten (10) working days after the final inspection and include a list of deficiencies requiring correction. MDSHA shall require MDSHA's contractor to correct said defects and deficiencies and MDSHA and WVDOH shall again jointly inspect those items listed on the "punch list" developed by WVDOH. Upon the satisfactory completion of the work related to WVDOH PORTION of the PROJECT and within fifteen (15) working days of final inspection of the corrected "punch list" items, WVDOH shall provide written notice to inform MDSHA that the work related to WVDOH PORTION of the PROJECT is satisfactory, and WVDOH shall accept the WVDOH PORTION of the PROJECT for ownership and maintenance.
5. WVDOH shall be responsible for all WVDOH inspections, materials and specialized tie-in connection services performed or provided by WVDOH for the WVDOH PORTION of the PROJECT.
6. WVDOH shall be responsible for, in addition to actual construction costs of the WVDOH PORTION of the PROJECT, MDSHA's administrative and general costs and overhead, construction engineering services, direct salaries and payroll burden associated with the WVDOH PORTION of the PROJECT.



7. WVDOH agrees to permit MDSHA to utilize WVDOH owned rights-of-way or any other WVDOH property interests needed for access, staging area, and for the construction of the PROJECT.

## VII. CONSTRUCTION PHASE FUNDING

- A. The total amount to be reimbursed to MDSHA by WVDOH for the construction of the WVDOH PORTION of the PROJECT is currently estimated to be Thirty Eight Million Dollars (\$38,000,000) (**"INITIAL CONSTRUCTION COSTS"**). The final cost, which could be higher or lower, will be determined by the sum of final design costs, construction activities and items based on bid prices, conditions encountered during construction, MDSHA's direct salaries, payroll burden and overhead incurred during the construction of the WVDOH PORTION of the PROJECT. WVDOH agrees that it shall pay all such costs (**"WVDOH CONSTRUCTION COSTS"**).
- B. In the event that MDSHA determines that the costs to construct the WVDOH PORTION will exceed the estimate of Thirty Eight Million Dollars (\$38,000,000), MDSHA will promptly notify WVDOH in writing, providing details as to the revised Construction Cost Estimate for the WVDOH PORTION of the PROJECT and the reason for the estimated cost increase. Upon notification from MDSHA that WVDOH's reimbursement obligation to MDSHA for the WVDOH PORTION may exceed or is approaching the limits of the Construction Cost Estimate, WVDOH shall immediately either (i) allocate additional funding for the WVDOH PORTION so as not to delay MDSHA's construction contractor or (ii) revise the scope of work for the WVDOH PORTION in order to stay within WVDOH's current allocations. However, in the case of option (ii) above, WVDOH shall be solely responsible for all resulting costs incurred by MDSHA and caused by redline revisions resulting from (ii). WVDOH reserves the right to review the documentation supporting any invoices and/or cost increases presented to WVDOH by MDSHA.
- C. MDSHA shall provide WVDOH with a copy of the final public solicitation bid package for the PROJECT, including all addenda thereto. Upon receipt of the bid results, MDSHA shall provide WVDOH with the resulting bid tabulation report for the WVDOH PORTION of the PROJECT. WVDOH shall issue a contract release order for payment for the construction costs to MDSHA for the WVDOH PORTION of the PROJECT.
- D. If the contractor's bid for the WVDOH PORTION of the PROJECT exceeds the INITIAL CONSTRUCTION COSTS, WVDOH shall immediately (i) allocate additional funding for the WVDOH PORTION so as not to delay MDSHA's construction contractor, or (ii) revise the scope of work for the WVDOH PORTION to stay within WVDOH's current allocations. However, in the case of (ii) above, WVDOH shall be solely responsible for all resulting costs incurred by MDSHA caused by redline revisions resulting from (ii). Once WVDOH has selected either (i) or (ii) above, MDSHA shall award the PROJECT contract, in its sole discretion, but in accordance with WVDOH's selection.

- E.** In the event WVDOH disputes any billings from MDSHA, WVDOH may withhold payment only for the disputed item(s). Within thirty (30) days of WVDOH's receipt of MDSHA's invoice accompanied by sufficient supporting documentation for such work, WVDOH shall meet with MDSHA to resolve the disputed item(s). At said meeting, MDSHA and WVDOH shall use good faith efforts to resolve all disputed item(s). Disputed item(s) not resolved within such time period shall be referred to MDSHA's District Engineer and the WVDOH contact listed in Section IX. M. of this MOU, for resolution. MDSHA and WVDOH agree to meet to resolve disputed items within sixty (60) days of WVDOH providing notice to MDSHA. Items not resolved within sixty (60) days shall be referred to the MDSHA's Deputy Administrator/Chief Engineer for Operations and WVDOH's Deputy Secretary for Highway for resolution.
- F.** All disputed invoiced item(s) shall be settled prior to MDSHA's final payment to MDSHA's contractor for the PROJECT.
- G.** MDSHA shall provide WVDOH with periodic invoices accompanied by supporting documentation to substantiate costs for the PROJECT based on MDSHA's contractor's cost estimates/progress billings, plus any additional costs and overhead as applicable for that period. Within thirty (30) days of WVDOH's receipt of each periodic invoice, WVDOH shall: (i) pay each periodic invoice submitted by MDSHA upon receipt, or (ii) provide a written dispute to MDSHA for the periodic invoice. Should WVDOH reasonably request additional documentation, MDSHA shall promptly provide WVDOH with the requested documentation, if available. MDSHA shall make all payments to MDSHA's contractor in a timely manner for all items of work that have been successfully performed and completed in accordance with the PROJECT contract, except in the case of items that are disputed by WVDOH.
- H.** In the event WVDOH does not make timely payments of undisputed documented construction related invoices submitted by MDSHA to WVDOH as provided herein, MDSHA shall, at its sole discretion and after providing thirty (30) days prior written notice to WVDOH's contact designated in Section IX. M., send all delinquent invoices for collection to MDSHA's Central Collection Unit ("CCU") which is located at:

Maryland Department of Management and Budget  
300 West Preston Street, First Floor  
Baltimore, MD 21201

Phone: 410-767-1220 or 1-888-248-0345  
Email: [ask.ccu@maryland.gov](mailto:ask.ccu@maryland.gov)



## VIII. MAINTENANCE RESPONSIBILITIES

- A. Upon completion of the construction of the PROJECT, the MDSHA ROADWAY portion of the PROJECT shall be owned and maintained by MDSHA.
- B. Upon completion of construction of the PROJECT, the WVDOH ROADWAY portion of the PROJECT shall be owned and maintained by WVDOH.
- C. Upon completion of the construction of the PROJECT, the BRIDGES shall be jointly owned by MDSHA and WVDOH, and maintained by MDSHA as outlined in **Exhibit Number 1** and **Exhibit Number 2**.

## IX. GENERAL

- A. The recitals (WHEREAS clauses) are incorporated herein as a substantive part of this MOU.
- B. The parties hereby warrant and affirm that the persons executing this MOU on its respective behalf are authorized and empowered to act on behalf of the respective parties.
- C. Whenever the approval of MDSHA or WVDOH is required under this MOU, such approval will not be unreasonably withheld, conditioned or delayed.
- D. The parties hereto agree to cooperate with each other to accomplish the terms and conditions of this MOU.
- E. This MOU shall inure to the benefit of and be binding upon the parties hereto, their agents, successors, and assigns.
- F. Except as otherwise specifically provided, no amendment or modification of this MOU is valid unless the same is in writing and signed by each party to this MOU.
- G. MDSHA shall not be liable for any obligation, act, or omission that is the responsibility of WVDOH, its contractors, employees, consultants, assigns, or its agents hereunder.
- H. WVDOH shall not be liable for any obligation, act, or omission that is the responsibility of MDSHA, its contractors, employees, consultants, assigns, or its agents hereunder.
- I. This MOU and any WVDOH issued permit does not grant or create for MDSHA any interest in the real property of West Virginia.
- J. All MDSHA invoices shall be accompanied by sufficient documentation by MDSHA to evidence actual costs incurred. If WVDOH requires additional

documentation, WVDOT may have WVDOT authorized personnel visit MDSHA to verify all documentation and to conduct independent audits. WVDOT is to contact:

Ms. Carmella Ezekwe, Chief  
Accounts Receivable  
Office of Finance  
Maryland State Highway Administration  
Mail Stop C-504  
707 N. Calvert Street  
Baltimore, MD 21202  
Phone: 410-545-5745  
Email: [cezekwe@sha.state.md.us](mailto:cezekwe@sha.state.md.us)

K. All notices and/or invoices shall be addressed:

If to the WVDOT:

Paul A. Mattox, Jr., P.E.  
Secretary of Transportation – Commissioner of Highways  
West Virginia Department of Transportation  
Building Five, Room 110  
1900 Kanawha Boulevard  
Charleston, WV 25305-0430  
Phone (304)558-3505  
Fax (304)558-1004  
Email [dot.commissioner@wv.gov](mailto:dot.commissioner@wv.gov)

R.J. Scites, P.E.  
Director of Engineering Division  
West Virginia Division of Highways  
1334 Smith Street  
Charleston, WV 25305  
Phone: 304-558-2885  
Email: [Raymond.J.Scites@wv.gov](mailto:Raymond.J.Scites@wv.gov)

If to MDSHA:

Mr. Anthony Crawford  
District Engineer  
State Highway Administration  
1250 Vocke Road  
La Vale, MD 21502  
Phone: 301 729-8486  
Fax: 301-729-6968  
E-mail: [acrawford@sha.state.md.us](mailto:acrawford@sha.state.md.us)



If to MDSHA Office of Structures:

Mr. Earle S. Freedman  
Director – Office of Structures  
Maryland State Highway Administration  
707 N. Calvert Street, MS C-203  
Baltimore, MD 21202  
Phone: 410-545-8060  
Email: [efreedman@sha.state.md.us](mailto:efreedman@sha.state.md.us)

with a copy of all correspondence to:

SHA Agreements Team  
Office of Procurement and Contract Management  
State Highway Administration  
707 N. Calvert Street, Mailstop C-405  
Baltimore MD 21202  
Phone: 410-545-0437  
Fax: 410-209-5025  
E-Mail: [SHA\\_Agreements\\_Team@sha.state.md.us](mailto:SHA_Agreements_Team@sha.state.md.us)

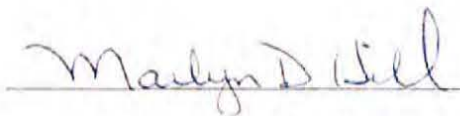
- N. All parties to this MOU shall comply with the requirements of **APPENDIX A** (2 pages) and **APPENDIX E** (1 page) of MDSHA's Standard Title VI/Non-Discrimination Assurances DOT Order No. 1050.2A which generally set forth non-discriminatory regulations and other civil rights related regulations. **APPENDIX A** and **APPENDIX E** are attached hereto and incorporated herein as substantive parts of this document.

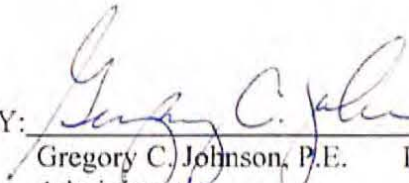
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IN WITNESS WHEREOF, the parties hereto have caused this MEMORANDUM OF UNDERSTANDING to be executed by their proper and duly authorized officers, on the day and year first above written.

**MARYLAND STATE HIGHWAY  
ADMINISTRATION**

WITNESS:

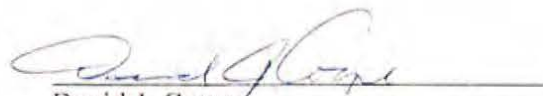
  
Marilyn D. Hill


BY:  5/6/2016  
Gregory C. Johnson, P.E. Date (SEAL)  
Administrator

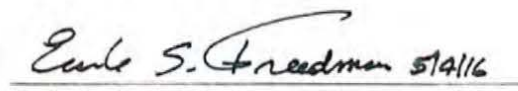
**APPROVED AS TO FORM AND  
LEGAL SUFFICIENCY:**

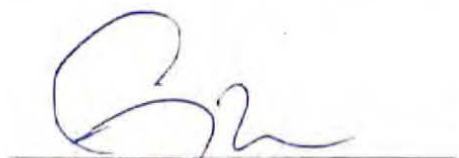
  
Libby C. Rappaport  
Assistant Attorney General

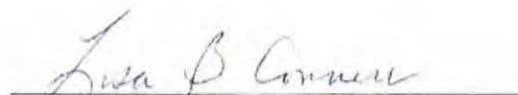
**RECOMMENDED FOR APPROVAL:**

  
David J. Coyne  
Deputy Administrator/Chief Engineer  
for Operations

  
Cheryl R. B. Hill  
Deputy Administrator for Administration

 5/4/16  
Earle S. Freedman  
Director  
Office of Structures

  
Gregory I. Slater  
Acting Deputy Administrator/Chief Engineer  
for Planning, Engineering, Real Estate and  
Environment

  
Lisa B. Conners  
Director  
Office of Finance

Witness

THE STATE OF WEST VIRGINIA

BY

Earl Ray Tomblin  
Governor

(SEAL)

Date

4/18/16



WEST VIRGINIA DEPARTMENT OF  
TRANSPORTATION

Paul A. Mattox, Jr.

Paul A. Mattox, Jr., P.E.

Secretary/Highways Commissioner

West Virginia Department of

Transportation/Division of Highways

APPROVED AS TO FORM AND  
LEGAL SUFFICIENCY:

Attorney

APPROVED AS TO FORM THIS

14<sup>th</sup> DAY March, 2016

ATTORNEY LEGAL DIVISION  
WEST VIRGINIA DEPARTMENT  
OF TRANSPORTATION  
DIVISION OF HIGHWAYS

160303



SUPPLEMENTAL AGREEMENT

THIS SUPPLEMENTAL AGREEMENT, Made this 24 day of December, 1963, between THE STATE ROAD COMMISSION OF WEST VIRGINIA, a corporation, hereinafter called "COMMISSION," and the STATE ROADS COMMISSION OF MARYLAND, acting for and on behalf of the State of Maryland, hereinafter called "ROADS COMMISSION,"

W I T N E S S E T H:

WHEREAS, COMMISSION and ROADS COMMISSION entered into an agreement dated the 20th day of July, 1960, for the joint construction of a multi-lane highway bridge, on Interstate Route No. 81, over the Potomac River, approximately one mile down stream from Williamsport, Maryland, to connect Washington County, Maryland, with Berkeley County, West Virginia; and

WHEREAS, it was originally contemplated that ROADS COMMISSION would let to construction that portion of the project which included the driving of piling for the south abutment of the highway bridge; and

WHEREAS, it has now become desirable to include the driving of piling for the south abutment of said bridge in the approach contract to be let to construction by COMMISSION; and

WHEREAS, it has been determined that the division of responsibility for payment of construction and maintenance costs should be altered;

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth, COMMISSION and ROAD COMMISSION agree as follows:

SECTION 1. COMMISSION will include the driving of the piling for the south abutment of the multi-lane highway approach contract. ROADS COMMISSION will reimburse COMMISSION its proportionate share of such work upon submission of proper invoice by COMMISSION.

SECTION 2. The division of payment for construction costs and routine maintenance costs between the two states, as set out in Sections 6 and 8 of the basic agreement, is altered to indicate COMMISSION'S responsibility at Twenty-six and seven tenths per cent (26.7%) and ROADS COMMISSION'S responsibility at Seventy-three and three tenths per cent (73.3%).

SECTION 3. ROADS COMMISSION agrees to assume the responsibility for routine maintenance as set forth in Section 8 of the original agreement.

IN WITNESS WHEREOF, the parties hereto have caused their respective names to be signed, and official seals hereunto affixed by their proper officers thereunto duly authorized as of the date hereof.

ATTEST:

THE STATE ROAD COMMISSION OF WEST VIRGINIA

*Robert H. McLean*  
Executive Secretary

By: *Burl G. Sawyer*  
Its Commissioner

APPROVED:

*W. W. W. Sawyer*  
Governor of West Virginia

ATTEST:

STATE ROADS COMMISSION OF MARYLAND

*W. W. W. Sawyer*  
Secretary

By: *J. L. L.*  
Chairman & Director of Highways

APPROVED:

*W. W. W. Sawyer*  
Chief Engineer, State Roads  
Commission, Maryland

Approved by the Board  
and by the Secretary  
Nov. 12, 1918  
*J. L. L.*  
Chairman & Director of Highways

SNC of MA Copy

Contract W-446-18-620  
F.A.P. No. I-81-1(100)0

Bridge No. 21078

AGREEMENT

THIS AGREEMENT, executed in duplicate, made and entered into this 20TH day of July, 19 60, by and between the State Road Commission of West Virginia, by its Commissioner, acting for and on behalf of the State of West Virginia, hereinafter called "Commissioner", and the State Roads Commission of Maryland, acting for and on behalf of the State of Maryland, hereinafter called "Roads Commission", Witnesseth:

WHEREAS, Commissioner and Roads Commission contemplate construction of multiple lane highways in West Virginia and Maryland, known as Interstate Route #81, hereinafter called "Project" connecting Washington County, Maryland, with Berkeley County, West Virginia, by means of a multiple lane highway bridge over the Potomac River about one mile downstream from Williamsport, Maryland, and

WHEREAS, Preparation of Plans and Specifications or arranging therefor by the Roads Commission for "Project" is hereby authorized by Commissioner and Roads Commission as a joint project, and when said plans, etc., are approved, will become a part of this agreement by reference. It is understood that construction may be deferred until a later date as mutually agreed upon by the parties hereto, and

WHEREAS, "Project" is a part of the Interstate Highway #81 and Federal Aid Interstate Highway funds are to be used to defray Interstate portion of costs thereof, all in accordance with Federal Regulations, and

WHEREAS, Chapter 17, Article 4, Section 34 of the Code of West Virginia of 1955 and Section 2, Article 89B of the Annotated Code of Maryland, 1957, Edition, authorize the Commissioner and Roads Commission, respectively, to enter into an agreement for the proper construction and maintenance of the bridge.

NOW, THEREFORE, THIS AGREEMENT WITNESSETH, that for and in consideration of the premises, and the sum of \$1.00 payable by each party hereto to the other, the receipt whereof is hereby acknowledged, and in further consideration



21078

of the mutual covenants hereinafter set forth to be kept and performed, the parties hereto do hereby agree as follows:

SECTION 1. For the purposes of this Agreement, the boundary line between the State of West Virginia and Maryland is to be considered as Station 110+18, as shown on a plan prepared by Roads Commission and identified as General Plan and Elevation, dated August 11, 1959, Contract W-446-18-620.

SECTION 2. Also for the purposes of this Agreement, the following terms will have the meanings respectively ascribed to them in this Section, except in those instances where the context clearly indicates a different meaning:

- (1) Construction Costs - All costs incident to construction of the bridge, including all surveys, designs, plans, contract costs, engineering and overhead costs, but excluding surveys, right of way costs, plans of and construction necessary for approaches to the bridge.
- (2) Major Repairs - All major work in repairing or reconstructing the bridge substructure and superstructure, including painting below the roadway, but excluding routine maintenance as hereinafter defined.
- (3) Routine Maintenance - Ordinary and normal care and maintenance work, such as but not limited to snow removal, signing, traffic painting, placing of abrasives and chemicals, cleaning roadway and safety curb surfaces, repairing wearing surface of roadway and painting above deck, but excluding all major repairs as hereinabove defined. Furthermore, this agreement shall not apply to any type of maintenance on approach roads to the bridge, it being hereby agreed that each State will maintain, at its sole expense, its approach roads.

SECTION 3. Roads Commission shall prepare and cause to be prepared, all surveys, plans, specifications and estimates of costs for the new bridge all of which, or any revisions thereof are subject to the approval of the parties hereto.

Roads Commission and Commissioner shall obtain any permits for the crossing of Government owned lands, in their respective States, and necessary by the construction of the project.

SECTION 4. The Roads Commission will advertise the aforesaid work for construction and, in accordance with regular Commission procedure, receive bids for same. No contracts for the work shall be awarded without concurrence of Commissioner.

SECTION 5. Commissioner shall survey, prepare plans for, acquire and pay for all rights of way necessary for that portion of the bridge and approaches situated in West Virginia, and shall perform and pay for all costs and expenses of surveys, designs, plans and construction necessary for the West Virginia approach to the bridge. The Roads Commission shall survey, prepare plans for, acquire and pay for all rights of way necessary for that portion of the bridge and approaches situated in Maryland and shall perform and pay for all costs and expenses of surveys, designs, plans and construction necessary for the Maryland approach to the bridge.

SECTION 6. Division of payment of construction costs between the two states shall be based upon the ratio as the estimated cost of that part of the structure in each state bears to the estimated cost of the entire structure. Based upon preliminary cost estimates prepared by Roads Commission, it is hereby agreed that West Virginia is responsible for and shall pay thirty-three (33) per cent. of the construction costs and Maryland is responsible for and shall pay sixty-seven (67) per cent. of the construction costs.

SECTION 7. As aforesaid, Roads Commission will advertise, receive bids and make award, after concurrence by Commissioner, Roads Commission to furnish Commissioner with copy of all Plans, Specifications, Proposal Forms and other contract documents. Thereafter, Roads Commission will supervise construction of the Bridge Structure and handle and dispose of all details with contractor (s). Nothing herein shall deny Commissioner the right to place inspectors upon work performed in West Virginia and all such work is subject to approval by Commissioner. In case of any changes involving major revisions in plans or awarded cost, then Roads Commission will consult Commissioner, negotiate and arrive at decision mutually agreeable to both States. Roads Commission will pay contractor (s) under its usual current estimate basis, and accordingly submit and render invoices to Commissioner, and such invoices will be submitted at intervals of not less than thirty (30) days nor more than sixty (60) days. Said invoices will be for proper ratio of amounts paid contractor as described in Section 6. Commissioner agrees to reimburse Roads Commission within thirty (30) days of receipt thereof.

For surveys, engineering, overhead, and other proper and justifiable construction costs (excluding approaches) Roads Commission shall invoice Commissioner at proper ratio as described in Section 6, said billing to be at 90 days intervals, and Commissioner agrees to reimburse Roads Commission within thirty (30) days of receipt thereof.

In case of any engineering, overhead, and other proper and justifiable construction costs (excluding approaches) incurred by West Virginia, Commissioner shall invoice Roads Commission on basis of proper ratio of such as described in Section 6, and Roads Commission agrees to reimburse Commissioner within thirty (30) days of receipt thereof.

SECTION 8. Upon completion of the bridge and its acceptance by Commissioner and Roads Commission, title to said bridge and the approaches thereto shall be vested ~~in~~ in the State of Maryland and the State of



West Virginia proportion to and in accordance with the boundary line between said States, as more particularly established and set forth in Section 1 of this Agreement, and upon such completion and acceptance," the Commissioner shall bear the costs of major repairs to the bridge, roadway, superstructure and substructure in West Virginia, and the Roads Commission shall bear the costs of major repairs to the bridge, roadway, superstructure and substructure in Maryland. For routine maintenance the division of cost thereof shall be on the basis of the ratio that the length of bridge in each state bears to the total length thereof and based upon the accepted plans for the bridge, responsibility for routine maintenance shall be thirty-three (33) per cent to West Virginia and sixty-seven (67) per cent to Maryland. Promptly upon acceptance of the structure by the two States, a plan for performance of and supervision of routine maintenance shall be discussed at a joint meeting of representatives of Commissioner and Roads Commission. This shall result in recommendation for handling routine maintenance to Commissioner and Roads Commission and after approval thereby shall result in one of the States assuming the total responsibility for such routine work as the selected State may be best suited or adapted by location and ~~equipment~~ of such State's equipment and personnel. Once selected and approved by Commissioner and Roads Commission, it shall continue in full force and effect until a subsequent possible re-distribution of material, maintenance equipment or maintenance shops location as would justify a change. Irrespective, however, of responsibility of routine maintenance the State performing the work shall be reimbursed by the other State at ratio set forth above. Invoices to be submitted at quarterly intervals and paid within 30 days after receipt thereof.

Commissioner shall perform all work and bear all costs of maintaining

approaches to the bridge in West Virginia. Roads Commission shall perform all work and bear all costs of maintenance on approaches to bridge in Maryland.

SECTION 9. The bridge shall not be discontinued, abandoned or disposed of without the consent of both the Commissioner and the Roads Commission. In the event the bridge shall be disposed of, the proceeds derived from such disposal shall be distributed between the Commissioner and the Roads Commission in the same proportions as those borne by each in the costs of constructing the bridge.

SECTION 10. The terms and conditions of this agreement shall inure to and be binding upon the parties hereto, their successors, and assigns.

IN WITNESS WHEREOF the parties hereto have caused these presents to be executed in duplicate by their proper officers thereunto duly authorized the day and year first above written.

STATE ROAD COMMISSION OF WEST VIRGINIA

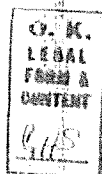
By P. B. Rupp  
Commissioner

ATTEST:

Orville A. Boaz  
Executive Secretary

APPROVED:

W. H. Henderson  
Governor of West Virginia



STATE ROADS COMMISSION OF MARYLAND

By J. H. O.  
Chairman & Director of Highways

ATTEST:

W. H. O.  
Secretary

APPROVED:

Daniel A. Fisher  
Chief Engineer, State Roads  
Commission, Maryland

Approved as to form  
and legal effect  
July 11 1960  
[Signature]  
Special and Acting Secretary



Martin O'Malley, Governor  
Anthony G. Brown, Lt. Governor

James F. Smith, Jr., Secretary  
Melinda H. Peters, Administrator

January 17, 2014

Subject: SHA Contract No.: WA344B21  
Description: Rehabilitation and Widening of Dual  
Bridge Nos. 21078 on I-81 over Potomac River and  
C&O Canal Historic Park

Mr. Paul A. Mattox, Jr., P.E.  
Secretary of Transportation - Commissioner of Highways  
West Virginia Department of Transportation  
1900 Kanawha Boulevard, Building Five, Room 110  
Charleston, West Virginia 25305-0430



Dear Mr. Mattox:

We were recently contacted by Mr. Ali Sadeghian of your office regarding our joint project to widen and rehabilitate the existing dual bridges on I-81 over the Potomac River. At that time he discussed the project with Mr. John Narer of my staff and stated that the West Virginia Department of Highways would like us to give consideration to incorporating the widening of an additional section of I-81 south of the bridge crossing.

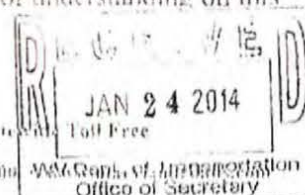
Specifically, Mr. Sadeghian stated that the West Virginia portion of I-81 approaching the bridge crossing had been recently widened to within a mile of our current project limits. This widening, coupled with the previously completed West Virginia roadway, provides for three through travel lanes in each direction for approximately 10 miles of I-81 from this point (1 mile +/- south of the Potomac River) southward through Martinsburg. At the completion of our jointly planned project, I-81 would be capable of accommodating three lanes of traffic in each direction from the I-81 interchange with Maryland 68/63 southward into West Virginia. The only exception would be the mile long section that is located between our jointly planned project and your recently completed project.

Mr. Ali Sadeghian questioned if we would be willing to include this additional section of widening within our project if the West Virginia Department of Highways was willing to assist in the project coordination and reimburse Maryland for all costs related to the design and construction of this additional section of I-81. We have discussed this issue internally with our management staff and concur with you that it makes sense to incorporate the additional widening into a single project. Therefore, we are willing to move forward with your request. Since we are both in accord with this direction, we will prepare a draft memorandum of understanding on this topic and forward it to you for your review and comments.

My telephone number/toll-free number is 410-545-8060

Maryland Relay Service for Impaired Hearing or Speech 1-800-735-2258 Statewide Toll Free

Street Address: 707 North Calvert Street • Baltimore, Maryland 21202 • Phone 410-545-0300





Mr. Paul A. Mattox

Page 2

We look forward to working with you on this project and moving forward with these badly needed bridge and roadway improvements. Should you wish to discuss this matter further please feel free to contact me at 410-545-8060 or our Project Manager John W. Narer at 410 545-8368 or [jnarer@sha.state.md.us](mailto:jnarer@sha.state.md.us) for further discussion.

Working together, the Shepardstown and Keyser/McCoole bridge projects turned out well, and we expect the same results at this location. West Virginia has always been a pleasure to work with on our joint projects. Please sign below indicating your concurrence and return to us as soon as possible so that we may initiate the design work for the third lane widening in West Virginia.

Very truly yours,

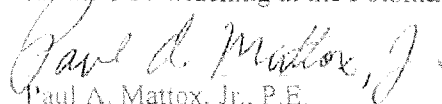


Earle S. Freedman, Director  
Office of Structures  
Maryland State Highway Administration

ESF:JWN  
Enclosures


Cc: Doug Simmons  
Melinda Peters  
Anthony Crawford

Concur in reimbursing Maryland for all design and construction costs associated with the additional roadway work in West Virginia for the I-81 widening at the Potomac River



Paul A. Mattox, Jr., P.E.  
Commissioner of Highways  
West Virginia Department of  
Transportation

APPROVED AS TO FORM THIS  
29<sup>th</sup> DAY OF 1 20 14

  
ATTORNEY LEGAL DIVISION  
WEST VIRGINIA DIVISION  
OF HIGHWAYS

## APPENDIX A OF THE TITLE VI ASSURANCES

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the Contractor) agrees as follows:

1. **Compliance with Regulations:** The Contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, the Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Recipient or the Federal Highway Administration as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance.** In the event of a contractor's noncompliance with the Nondiscrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
  - a. withholding payments to the Contractor under the contract until the Contractor complies; and/or
  - b. cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.